VOL. 16 JULY, 1942 No. 3

THE PSYCHIATRIC QUARTERLY

PUBLISHED BY AUTHORITY OF THE
NEW YORK STATE DEPARTMENT OF MENTAL HYGIENE

The Psychiatric Quarterly, formerly the State Hospital Quarterly, is the official organ of the New York State Department of Mental Hygiene.

Volumes begin with the January number. Annual subscription rate, $2.00 in U. S. and its possessions; $2.50 elsewhere.

Editorial communications, books for review and exchange should be addressed to the editor, Dr. Richard H. Hutchings, Utica State Hospital, Utica, N. Y.

Business communications, remittances and subscriptions should be addressed to the State Hospitals Press, Utica, N. Y.

Entered as second-class matter April 17, 1917, at the postoffice at Utica, N. Y., under the Act of March 3, 1897.

DEMENTIA PRAECOX*

Formulation by Kraepelin, Bleuler and Meyer

BY SOLOMON KATZENELBOGEN, M. D.†

The terms dementia præcox and schizophrenia are almost generally in use as synonyms. The pathological conditon or conditions covered by this nomenclature are designated by Adolf Meyer as parergasic reactions.

It is common knowledge that some psychiatric institutions are more ready than others to make the diagnosis of dementia præcox-schizophrenia, although they are diagnosing similar cases. Evidently, a common understanding of the conditions designated as dementia præcox or schizophrenia or parergasia is still lacking. It seems, therefore, appropriate to discuss the fundamental concepts of these conditions, as formulated by Kraepelin, Bleuler and Adolf Meyer.

Kraepelin's Formulation

The term *démence précoce* was first used by Morel in 1860 in the diagnosis of the mental condition of a boy 14 years old. Loss of memory and marked mental deterioration were the outstanding symptoms. The history revealed that the boy had gradually grown seclusive, had been ashamed of his short stature and had shown hatred toward his father. Hecker, in 1871, under the heading of "hebephrenia," described a disease which begins in adolescence and rapidly progresses toward mental deficiency. Kraepelin, in 1896, under the influence of Morel and Hecker, applied Morel's term *démence précoce* to varied clinical syndromes which he thought to be the same disease entity, inasmuch as they had in common the following features: a beginning in adolescence or early adulthood; a progression toward a similar state of dementia; and, with most, if not all, of the similar and dissimilar clinical features assumingly being caused by similar morbid processes.

Kraepelin's contention that the disease begins at an early age is based on a study of 1,054 cases. This study shows that the onset

*Read before the Section on Neurology and Psychiatry of the District of Columbia Medical Society, November 6, 1941.

†Clinical professor of psychiatry, George Washington University School of Medicine.

of marked morbid manifestations reaches the highest frequency between the ages of 20 and 30 (70 per cent). The term "præcox," implying Hecker's contention of the existence of a relationship between dementia præcox and puberty, appears, however, to be hardly justified, inasmuch as, on the one hand, there is a relatively small percentage of cases in the group between the ages of 10 to 20; and on the other hand, there is a fair percentage of cases in the group between 30 and 45.

Kraepelin, himself, recognized that it was unlikely that the disease depended on sexual development in the period of puberty. He found additional support to this effect in the frequent beginning of manic-depressive psychoses also between the second and third decades, suggesting that this age shows a particular tendency to develop mental disorders. In further discussions of the etiology of dementia præcox, Kraepelin considered the findings of an hereditary taint in 53.8 per cent of his 1,054 cases. These findings and those of Rudin were regarded as suggesting injury to the germ plasm. Of greater significance, appeared to Kraepelin the personality peculiarities of his patients: They were unusually quiet, shy, reserved, irritable, capricious, from early childhood and throughout their lives before the onset of the outspoken morbid manifestations. These personality traits in the prepsychotic life were looked upon as being, at least partly, the product of the cause of the malady. It is important to note, however, Kraepelin's emphasis of the fact that persons with these peculiarities may not become ill. Furthermore, in using, in the eighth edition of his work in 1913, the term schizophrenia, Kraepelin assumes the following alternatives: a) either there are other than dementia præcox factors which would be responsible for the *schizophrenic-like peculiarities;* b) or, these peculiarities are the remnants of the arrest in the development of the dementia præcox process—"latent schizophrenia." Thus, Kraepelin remains uncertain as to the relationship of the schizophrenia-like reactions to dementia præcox. As to the nature of the dementia præcox factors responsible for both the full-fledged and the "latent" illnesses, Kraepelin assumes the existence of metabolic disorders resulting in auto-intoxication.

In reading Kraepelin's description, in the eighth edition, one cannot help feeling that the hopelessness suggested by the term

dementia præcox is hardly warranted either by the facts he offers, or by his own interpretation of the latter. From the observation of a patient who improved from dementia præcox and remained improved for 29 years and of other patients whose improvement lasted over a decade, Kraepelin admits the possibility of a complete and lasting cure. Moreover, he recognizes that in many cases the most abnormal reactions may disappear, with the remaining personality changes mild enough not to handicap the former patient in the performance of his daily activities.

To cite certain statistical studies, Kraepelin observed marked improvement lasting from several months to decades, in 26 per cent of all of his dementia præcox patients. Recovery took place in about 8 per cent of the hebephrenic and in about 13 per cent of the catatonic patients. In comparing his findings *with more favorable* statistics of others, he points out the reasons for the discrepancies: First, the recognition of dementia præcox, while not offering difficulties in most cases, remains uncertain in a great many cases. Thus, the diagnoses coming from different sources are not altogether comparable. Second, the delimitation of recovery is not based on well-characterized criteria used by different observers. Third, Kraepelin calls attention to the fact that very marked improvement, which is tantamount to recovery, may last a decade and longer. Therefore, the question of whether one deals with recovery or improvement in individual cases, may remain uncertain for many years.

It would hardly serve the purpose of this review to present Kraepelin's masterly description of the nosology of dementia præcox, and more specifically of its traditionally accepted clinical forms. The sole object of this statement is to outline his formulation of the main characteristics and nature of the disease. From a study of about a thousand cases, Kraepelin singled out two main groups of disorders characteristic of the nature of the "distinct disease." They are: (I.) Weakening of emotional and volitional reactions. There is a more or less marked emotional dullness and lack of spontaneous independent action. However, what was acquired in the prepsychotic life in the sphere of abstract knowledge and practical performances may remain more or less preserved. But this cognitive part in the personality function also gradually

disappears, unless the lack of stimulus for action from within is compensated for by stimuli from without. (II.) Loss of harmony, that is, loss of the usual intimate connections among the emotional, volitional and intellectual reactions. These deficiencies, as Kraepelin points out, are described by Stransky as "Intrapsychic ataxia" —annihilation of the normal intrapsychic coordination. There is lack of the usual connections between emotional expressions, verbalizations of thoughts and other overt activities. The patient's thoughts and actions are determined by uncontrollable internal influences (impulses) and by chance-external influences. Both the chance-external and internal stimuli lead to obviously illogical or outright contradictory reactions. Thus, the behavior of the patient, judged at its face value, is stamped with the odd, incomprehensible, illogical, incalculable, and unpredictable, as compared to the usual, normal standards of behavior.

While Kraepelin gave us an extremely comprehensive and lucid description of the clinical conditions of dementia præcox, he has not elaborated on the psychodynamics nearly so much as Bleuler did. Yet in the last edition of his work, in discussing Bleuler's and Young's psychodynamic concepts, he expresses his own views. He feels doubtful about Bleuler's interpretation of autism as due to the patient's indulgence in his own fantasies. He regards the patient's withdrawal from reality as a manifestation of negativism; and he holds that both autism and negativism are not in any way connected with Bleuler's and Young's "complexes" but are provoked essentially by impairment of volition, which he considers to be the basic and most significant disorder, which stands out above everything else, in the behavior of dementia præcox patients. The gradual weakening of the will, Kraepelin specifies, may precede the onset of the psychosis by many years and this causes the prospective patient to shut himself up, more or less, from the external world before the actual beginning of the disease. The indulgence in imaginings is the direct consequence of disorders in volition. For, Kraepelin feels, he who is unable to control his will and with it his life gladly takes refuge in dreams. Kraepelin's criticism of the concept regarding the rôle of complexes may be considered, it seems to the present writer, as part and parcel of his attitude to-

ward psychoanalysis, which, to put it mildly, is far from being complimentary.

Bleuler's Concept

Bleuler objects to the term, dementia præcox, for the reason that the illness does not necessarily begin in early adolescence and does not invariably terminate in dementia. He prefers the term schizophrenia because of its psychodynamic connotation, namely, splitting of the various mental functions, which he regards as one of the main characteristics of the pathological condition. It should be noted that to Bleuler, schizophrenia is not a disease entity but rather a group of syndromes; he, therefore, speaks of schizophrenias. Whatever differences there are in the nosology of the varied schizophrenic syndromes, the essential characteristics of schizophrenic patients are: specific disorders in their thinking, their emotional reactions, and their relations with the external world.

Disorders in the thinking processes consist in a more or less marked loss of coherence in the normal association of ideas. The stream of thought is only partially guided or is not guided at all by any central idea, which a normal person would aim to follow through. It is not a basic idea, but only parts of one, inadequately associated—or it is certain of its unessential or entirely irrelevant characteristics—which direct the train of thought. Words of a similar sound, mere alliterations, fundamental or purely accidental stimulations from within (complexes, sensations) or from without (from the environment), excessive generalizations, the grasping only of the literal meaning of words—such things are determining the stream of thought, which thus becomes illogical, odd, incomprehensible. Another, extremely outstanding disorder in the schizophrenic thinking processes is the blocking of thought, caused mainly by disorders of affect. But the basic trouble of schizophrenia and the point of departure of all the schizophrenic manifestations, Bleuler emphasizes, is disorder in association of ideas, though other mental functions in the sphere of sensorium—orientation, recent and past memory, retention of digits, calculation—in so far as they can be explored, remain intact; and this is in contrast to true dementia.

The schizophrenic affective disorders, are also *sui-generis*. The appearance and behavior of certain schizophrenics, showing a more or less marked lack of emotional expression, suggest the often used characterization as flattening of emotions. However, the sudden emotional outbursts of excitement, anger in apparently emotionless schizophrenics, certain physiological manifestations of emotions, such as the psychogalvanic reactions, make it clear that the essential disorder is not that of a deficit. The main trouble lies in lack of cohesion, lack of harmony, between varied emotional reactions, and lack of appropriate rapport between emotional reactions and intellectual functioning. This results in affective ambivalence —simultaneous laughing and crying; in emotional reactions apparently detached from the intellectual functioning; or in emotional reactions manifesting themselves in an unusual, strange form, in their relationship to intellectual functioning.

Disorders in the schizophrenic's relationship with the external world—like the thinking and affective disorders—are equally of a special kind. In the English version of Bleuler's German "Textbook of Psychiatry," Brill states: "One feels emotionally more in touch with an idiot who does not utter a word, than with a schizophrenic who can still converse intellectually, but who is inwardly unapproachable." The attitude of the schizophrenic toward those around him, including the psychiatrist, is characteristic enough to be used in the differential diagnosis between manic-depressive psychosis and schizophrenia: The depressed or manic patient remains in affective contact with the environment, the schizophrenic does not. The manic-depressive is concerned with the external world, the schizophrenic appears to be disinterested; his passive attention, however, must be quite pronounced, inasmuch as mute catatonics are known to register what is going on around them, sometimes even in minute details.

The affective detachment from reality is accompanied by a more or less marked predominance of the internal life. Patients who have little or no rapport with the environment live in a world of their own, with their fantasies, their desires, which they may feel materialized, or with the sufferances caused by feelings of being persecuted. The loss of contact with reality is included in Bleuler's triad of basic disorders in schizophrenia. It should be

noted, however, that he considers the disorders in association of ideas as the first and foremost trouble of schizophrenia and the point of departure for the schizophrenic reactions.

Bleuler used dementia præcox and schizophrenia interchangeably as synonyms. This disease-entity—or rather, the group entity, since Bleuler speaks of schizophrenias—is, however, not to be identified with the schizophrenia-like picture, a symptom-complex, which may be observed in varied clinically well-defined psychotic conditions, or may even represent the essential psychotic condition. Bleuler clearly states that it is unwise to make, with certainty, a diagnosis of schizophrenia on the basis of a schizophrenic symptom-complex, although the diagnosis may be correct in 90 per cent of the cases. In emphasizing the value of the psychological aspect in the diagnosis of schizophrenia, Bleuler points out that the course of the disease is likely to change our diagnostic opinion derived from the psychological study. It follows that when we are faced with a clinical schizophrenic-like picture we are not certain whether we are dealing with dementia præcox, inasmuch as schizophrenia-symptoms may originate on a basis other than that of dementia præcox. It is the development of the disease which should be reckoned with as supplementing the symptomatology. Thus, while Bleuler objects to the term dementia præcox, he nevertheless accepts Kraepelin's concept regarding both the evolution and, as it will be seen later, also the somatic background of the disease. But the scope of Bleuler's schizophrenia is much wider than that of Kraepelin's dementia præcox. In addition to the latter, it includes so-called latent schizophrenia; it claims, moreover, to throw light on certain personality characteristics in the normal, and on their relationship to the disease. Schizophrenia-like disturbances in a mild form are to be found in individuals with latent schizophrenia, who may never develop the full-fledged psychosis; such disturbances may also be present in the prepsychotic life of schizophrenic patients, and they may be more or less marked also in normal individuals. Thus, the term "schizoid" means a certain type of mental reactions, which, in their pathologically exaggerated form constitute schizophrenia. But the schizoid element is present more or less in every person. In opposition to schizoid tendency, Bleuler speaks of syntonic tendency. He prefers the term "syntonic"

to Kretschmer's "cycloid," for the reason that the latter implies, mainly cyclic variations, whereas the essential characteristics of syntonia lie in the individual's vital contact with the environment. Both syntonic and schizoid traits coexist in both normals and patients. The maximum of "syntonia" is to be found in normals, the maximum of the "schizoid" element in patients.

This general description of the basic disorders and scope of schizophrenia needs to be supplemented by a more comprehensive discussion of their psychodynamics and diagnostic significance. Schizophrenic splitting is determined and controlled by memories, ideas heavily loaded with emotion, i. e., complexes. The schizophrenic personality, instead of acting as a whole, as an harmonious unit, is split, so to speak, into different personalities; while being controlled by varied idea-complexes, the multiple personalities perform, nevertheless, various functions at the same time or at a very close range. The result is that a schizophrenic patient may display very rapid and extraordinary shifts from one type of behavior to an entirely opposite one, and for no apparent reason, and without the slightest provocation. Thus, he may converse interestingly and sensibly with his interlocutor and suddenly become abusive toward him. He may show extremely benevolent interest in friends or relatives and in the next moment be entirely indifferent, if not showing hatred toward them. It is this splitting of the schizophrenic patient into different personalities under the influence of complexes which largely accounts for the particular symptomatology of schizophrenia. In Bleuler's opinion, the schizophrenic splitting represents only a magnification of physiological splitting in normal individuals. A normal person, under different circumstances, in accordance with his emotional state, may act so differently that he gives the impression of being constituted of multiple and entirely different personalities. And in case the normal individual is suddenly overwhelmed by an emotional content, he may immediately change into a different personality, thus imitating fairly completely the behavior shifts of a schizophrenic patient. The difference, however, is, it should be added, that in the normal the emotional upset is provoked by some occurrence; the changed behavior is transitory; it does not recur with any consistency; and the individual has insight into the situation.

The schizophrenic affective disorders account for obstruction or blocking of thought, which, as is known—if it repeats itself with fair consistency—is nearly a pathognomonic symptom of schizophrenia. Here, again, Bleuler reminds us that blocking *per se* is not pathological. Certain normal persons, when they are overcome by emotions, either of unpleasant or of pleasant nature, readily show thought-blocking, which, of course, is transitory. Blocking in schizophrenics is always determined by a complex or complexes. The protracted mutism in catatonics is regarded by Bleuler as protracted blocking in an exaggerated form, but similar in nature to transitory blocking in noncatatonic schizophrenics and, one may add, also to transitory blocking in normals.

The withdrawing from reality, autism, was characterized by Janet as loss of the sense of reality. This term as well as the term, loss of contact with reality, except in extreme cases or special clinical forms, does not do full justice to the behavior of full-fledged schizophrenics. Their relationship with the external world is not abolished but undergoes particular distortions. A schizophrenic may remain in contact with the external world, being oriented and communicative, but being controlled by his internal life; he immediately withdraws from the external world in case things or occurrences contradict his complexes. Moreover, the power of the complexes is such that it is apt to interfere constantly or at any time more or less with the schizophrenic's rapport with the external world.

Strange as it may seem, while the whole fascinating structure of Bleuler's psychopathology of schizophrenia rests on a psychological background, Bleuler himself objects to the tendency to consider schizophrenia only from the psychological aspect and to overlook its biological background. For Bleuler, schizophrenia appears to be a physical disease which may follow, for unknown reasons, a very irregular course. The process may remain arrested in any phase of the disease. Improvement or recovery may be related to the standstill of the brain process, because it is "less a deficiency than an intoxication." The organic trouble manifests itself on the psychological level by the fundamental disorders which have been described. These disorders, namely, of thinking, affect and rapport with the external world, develop quite independently

from unpleasant life experiences, from which, Bleuler pertinently remarks, not one of us is spared. He calls attention to the fact that all the miseries of the first World War had not caused any increase in the number of schizophrenic patients. Bleuler reemphasizes that, "The schizophrenic thinking process is in no way dependent on psychic influences, but solely on the seriousness of a fundamental process." And this process is, as just mentioned, of organic nature, being "less a deficiency than an intoxication."

Formulation of Adolf Meyer

Meyer takes a definite stand in regard to Kraepelin's formulation of dementia præcox. He regards as a stroke of genius Kraepelin's emphasis on certain features common, from the very onset of the illness, to a great number of cases which ultimately deteriorate. Unlike Kraepelin, his predecessors, Meyer points out, had stressed mainly transitory, rather than fundamental features.

With these preambulatory words of praise of Kraepelin's generalizations which led him to establish the disease entity, dementia præcox, Meyer takes issue with Kraepelin on many points. It should be noted that in the course of years, since 1905, Meyer had formulated his views on dementia præcox on several occasions. His critical remarks regarding Kraepelin's concept and certain of his contentions, while remaining essentially of the same nature, have in the course of time undergone certain changes.

Concerning the term dementia præcox, Meyer felt, in 1906, that in so far as it designates a perspective of deterioration, it should be applied to those cases which "have in the very center the stamp of deterioration; those cases which in many aspects are akin to dementia præcox cases but in which deterioration does not stand out as certain, should be regarded as *allied to dementia præcox.*"

In a further statement in 1922, Meyer points out that in view of the recovery of a great many patients with schizophrenic reactions, the term, dementia præcox, should preferably be avoided. That the development of the psychosis cannot be used as a criterion of its nature is also indicated by the fact that certain manic-depressive cases become chronic and reach a stage which is not distinguishable from schizophrenic states. What, therefore, seems more appropriate is to use terms which designate not the probable or even cer-

tain outcome but rather the "principle at work," i. e., the mode of reaction—hysteroid reaction, abnormal habit reaction—the kind of defect of attention and judgment. Finally, Meyer makes it clear that he is not so much interested in the diagnosis as he is in the facts and factors at work and the assets of the patient. In further elaborations on the same theme, he points out that there are cases which temporarily present the symptomatic earmarks of Kraepelin's dementia præcox that certainly do not belong to the group. In individual cases, therefore, the question arises whether the symptoms are fundamental or incidental; the diagnosis should take into consideration "the balancing of cause and effect" and the "patient's elasticity" which, he feels, have not been sufficiently stressed by Kraepelin.

To continue with the scrutiny of Kraepelin's work, Meyer raises objections to his hard and fast nosological doctrines and to his concepts of etiology and pathogenesis of dementia præcox. He takes issue with Kraepelin's contention that dementia præcox is an autonomous disease-entity, an autonomous brain disease. Thus, he notes that the symptomatology of mental functioning in dementia præcox includes many features which one finds in other than dementia præcox conditions. The neurological data are meager, consisting of isolated facts. The course of the illness is decidedly less fixed than in general paresis—Kraepelin's *paradigma* of dementia præcox. The etiologic concept of metabolic disorders and toxic states so far (in 1910) has not been supported by adequate factual material. The histological data are ambiguous; they may well be incidental to the functional disorders, i. e., the processes of anabolism and catabolism resulting from these disorders.

This critical appraisal by Meyer already gives certain hints, if not definite leads as to his stand in the matter. It behooves us now to take up those of his statements which express his views more fully and more explicitly.

For Meyer, the essential features of dementia præcox are: (a) disruption of judgment, without any evidence of intoxication, delirium, manic-depressive psychosis, hysterical, or epileptic disorders; (b) discrepancies between the mood and the general reaction of the patient; (c) peculiar attention disorders; (d) the patient's feeling of interference with his thinking; (e) deterioration in mat-

ters which are largely dependent on sound instinct, such as differentiation between the real and the unreal, and the critique of imaginative material. All these disorders are present in the face of relative clearness. One is, therefore, led to think of fundamental deterioration or defect which would account for so much perversion of instinct and reasoning. In addition to these fundamental features, one often meets with reactions such as a puzzled state, religious and mystic fascination, automatism, stupor. These reactions may appear as more or less adequate reactions, or they may have a certain pathological foundation but one which is different from that of dementia præcox, such as hysterical, psychasthenic reactions. What, however, constitutes one of the most important criteria of the dementia præcox process is not the excess of similar reactions—which may take place also in the average person under certain circumstances—but their oddity, incongruity and the obvious absence of sufficiently provocative factors. Meyer calls attention to the rather limited range of reactions the normal person is capable of using in various situations. Some of these, dementia præcox-like reactions, are used as a remedy to overcome a difficult situation. Thus, negativism, used by the normal as a "healthy indifference and more or less self-sparing dodging," becomes in the dementia præcox patient an "uncontrollable, unreasoning factor." Forgetting, inattention, distraction, praying, imaginative thoughts are used by the normal as expedients to overcome a disappointment; these are used by the dementia præcox patient, not as substitutive reactions, but as if he were in a rut of least resistance.

What appears to Meyer most helpful for the understanding of dementia præcox is the behavior of the patients. He finds most fruitful the concept of complexes as formulated by Freud and Jung, and his own concept of habit deterioration. His practical approach is to make the most of the facts available at present, the most outstanding ones being those of the makeup of the patient and his psychobiologic adjustments. The available evidence leads to the view that dementia præcox is the outcome of (1) conflicts of complexes and (2) inability for adequate adjustment. Thus, the mechanism can be understood, at least to a certain extent, along psychologic terms. From the practical standpoint, the psychogenic conception of dementia præcox has the merit of formulating

the clinical problem; and, thus, it permits pointing out, at least, in some cases the dangerous situation at the appropriate time.

Comprehensive clinical and psychological studies bring forward facts throwing more light on the psychodynamics of dementia præcox: Thus, disorders regarded as essential deterioration processes, in so far as they are not caused by an exogenous toxic substance, may be traced to their onset in the prepsychotic life of the patient, with very mild deviations from normal personality-functioning. The initially slight abnormalities gradually develop into the more outspoken pathological disorders of the actual psychosis. Study of the prepsychotic life also reveals the frequency of peculiarities in the makeup of dementia præcox patients. Then, clinical observation of catatonic reactions in conditions other than dementia præcox, suggests their interpretation as a specific functional reaction type which may possibly be understood as a phylogenetically very old reaction of protection or mystic surrender. Moreover, out of those patients who are considered as deteriorated ones, a few recover; and these are cases which from the very beginning give the impression of being akin to the deterioration group, rather than full-fledged members of this group. Clinical observations of this kind make Meyer feel that instead of blaming heredity or toxins, it is sounder to consider responsible factors in terms of "untimely evocation of instincts and longings and ensuing habit-conflicts."

Concerning the prognosis, Meyer sees a twofold difficulty: The one is that some patients who eventually deteriorate do not show, at the beginning of their illnesses, sufficiently marked characteristics to allow one to distinguish them from patients with recoverable psychoses. The other prognostic difficulty is that certain patients who do show reactions regarded as forecasting progression toward dementia, actually do not deteriorate.

From the standpoint of treatment, the recognition of the fact that disharmonies of habits are at the core of the problem is of utmost importance. For, while it is imperative to treat any disturbance the patient suffers from and to have him follow regulations of physical and mental hygiene, such medical care is of no avail if due attention is not paid to habit training, as long as dementia remains a perspective and not an accomplished fact.

Discussion

Now, an attempt will be made to bring forth the essential common features and the main differences in the concepts just discussed. Both Bleuler and Meyer object to the term dementia præcox for the same reasons. However, Bleuler used schizophrenia and dementia præcox interchangeably as synonyms. An explanation for this somewhat indefinite attitude may be found in the fact that Bleuler agrees with Kraepelin's formulation of the biological background of the disease; only, for motives of a psychological nature, he prefers to call the disease schizophrenia, rather than dementia præcox. Meyer uses parergasia in the sense of the psychological connotation of schizophrenia; but he opposes the term schizophrenia because of its too close identification with dementia præcox. This opposition is perfectly understandable if one recalls Meyer's unequivocal criticism of Kraepelin's concepts of the etiology and pathogenesis of dementia præcox. One may add that the replacement of "schizophrenia" with "parergasia" is certainly also due to Meyer's general use of a psychiatric terminology deriving from *Ergasia* meaning, *performance, behavior, psychobiologically integrated activity in general.*

Concerning the course of dementia præcox, there is no essential disagreement among Kraepelin, Bleuler and Meyer. The prognostic prejudice suggested by the term is certainly not warranted by Kraepelin's statistics of improvements and recoveries. A similar favorable development of the disease in a certain number of cases is, of course, taken for granted by Bleuler and Meyer. Regarding the age of onset of the disease, the facts observed by Kraepelin make him feel that it is unlikely that there exists a specific relationship between dementia præcox and the puberty period; this opinion is also shared by Bleuler and Meyer. Kraepelin's clinical description has not been surpassed either by Bleuler's or by Meyer's. It has stood the test of time and probably will remain a classical model.

As to the nature of dementia præcox, a close scrutiny of the concepts concerned with here reveals the following significant facts: Kraepelin regards as a very important etiological factor, the peculiar personality traits present in the prepsychotic life of his de-

mentia præcox patients. He further specifies that persons with such peculiarities do not necessarily become ill. His description of the personality peculiarities fits into that of Bleuler's schizoid personality. Obviously strongly influenced by Bleuler, Kraepelin goes so far as to speak of "latent schizophrenia" and of a "schizophrenia-like" clinical picture, of which the relationship to dementia præcox, he feels, remains uncertain. Kraepelin's characterization of dementia præcox disorders as thoughts and actions being determined by chance stimulations from within and without, impairment of spontaneous actions and lack of coordination between emotional expressions, verbalization of thoughts and other overt activities, contains, it would seem, the quintessence of what was later developed by Bleuler more elaborately, more explicitly and more comprehensively in his triad of the essential characteristics of schizophrenic patients; namely, specific disorders in their thinking, their emotional reactions and their relation with the external world. However, while Bleuler puts in the fore-front disorders in association of ideas, which he regards as the mainspring for all the other schizophrenic disturbances, Kraepelin sees the *primum movens* of the evil on the psychological level in the destruction of the will of the patient.

Regarding the primary cause of dementia præcox-schizophrenia, it is a brain process of organic nature to both Kraepelin and Bleuler. To Meyer, this organic etiology is, in the actual state of our knowledge, unacceptable for the reason that heretofore it has not been supported by adequate factual material.

As concerns the functional disorders in all of their aspects here considered, including psychodynamics, Meyer's formulation is in its essence akin to Bleuler's formulation in so far as the latter remains on the psychological level. To Bleuler's concept of complexes, Meyer adds his concept of habit deterioration.

St. Elizabeths Hospital
Washington, D. C.

HORMONAL INFLUENCE UPON "PUERPERAL PSYCHOSIS" AND NEUROTIC CONDITIONS

A Modification of Insulin Shock Treatment

BY MAJOR ALFRED BLUMBERG, M. C., U. S. A.,* AND OTTO BILLIG, M. D.†

Various investigators have attempted to separate psychoses connected with pregnancy from the usual psychiatric classifications. Their efforts have not met with success. It has not been possible to create a specific syndrome of "puerperal psychosis," for it has been found that it is the prepsychotic personality that lends the coloring to the psychosis. With these patients, the prognosis for mental recovery is good in the delirious type of reaction and in the manic-depressive group. The outlook is far less hopeful in the schizophrenic reaction type. Karnosh and Hope (see bibliography) expect spontaneous recovery in only 20 per cent of the schizophrenics. Bleuler is even less optimistic. With insulin shock treatment, it is undoubtedly possible to increase the incidence of recovery. However, with one of the writers' patients, it was possible to reach only partial improvement by means of insulin shock, although full recovery was established by combining the insulin shock treatment with hormone therapy.

The hormonal imbalance was suggested by the clinical course of the psychosis of this patient, who, after an initial improvement, showed an exacerbation of her psychotic symptoms during the postovulatory part of the menstrual cycle. These symptoms receded considerably when the menstruation took place or was to be expected.

The exacerbations disappeared after hormone therapy was initiated. In pregnancy, intensive hormonal changes take place; the stress of interglandular adjustment of the endocrine system is much increased. If the hormone-producing organs are not able to meet this increase, pathological conditions of one type or another will be manifested. The individual having a potentially psychotic personality makeup is prone to develop mental symptoms.

*Station Hospital, Camp Shelby, Mississippi.

†Highland Hospital, Asheville, N. C., and Duke University, Durham, N. C.

Case History

A 21-year-old white woman, this patient is the third of four children; she is six years younger than the next older brother; and there is a sister four years younger. The patient was always regarded as the "child" of the family. From the ages of 13 to 16, she showed some close idealistic attachment to her minister, a man 30 years her senior. Later, she had some minor attractions to boys about her age. Her attitude toward her parents was very shy, and they described her outstanding personality trait as that of being "very obedient." Her psychosis indicated that much repression was hidden behind that obedience.

At the age of 13, the girl met her future husband, at that time a friend of the family. From that age on, it was hoped and expected that she would marry him. The patient did not object to the marriage; and, when she was 20, she married this man, who was 20 years her senior. Apparently the marriage satisfied her parents more than her own ambitions, although, since she was of a "passive" nature, there were no overt difficulties in adjustment; and superficially she showed affection for her husband. On closer examination, that affection was more admiration than love. To her, he was more father than husband.

A few months after the marriage, the young woman became pregnant. During the pregnancy there was increasing evidence of toxemia, associated with albuminuria and mild edema. After a labor of 36 hours, the child was delivered by means of high forceps. While on the table, the patient's condition became critical; she was cyanotic; the pulse was rapid; and she was also confused for a short period. She was dismissed from the hospital after two weeks; and at that time, she showed evidence of being very tense and irritable. Two days later, she had to be readmitted to the general hospital because of her increasing restlessness; she became disoriented, hyperactive and noisy.

The color of her psychosis was of a nonspecific type at first; this prodromal period lasted for about three weeks and then changed completely. The patient developed condensations of ideas and misidentifications of less familiar persons in her surroundings. One of the writers, she identified as the clergyman of her 'teens; the

other represented two persons at the same time. Mannerisms, hallucinations, and delusions appeared. "My bones and flesh are drying up, and my life is going away. I have died so many times and in so many ways . . . The whole world will die for me in vain." When meeting people she shook hands employing a peculiar method, crossing both her arms and grasping both hands of the person she met, and inquiring, "Shall I kiss you like a Frenchman?" Often she snapped her fingers in a way peculiar to herself. She continuously reiterated, "Faith, hope and charity." She heard voices, smelled smoke, was afraid of snakes and spiders which she believed she saw crawling on the wall and in her bed, and which were biting her. ". . . that spider bit me and they want me to make a morphadite" (hermaphrodite?).

Her thoughts on sex centered around the problems of her married life. She showed a strong transference of affection to one of the writers, wanted to marry him, called herself by his name. At other times she was a divorced woman; or, "I'm a virgin and a holy angel; I'm the Virgin Mary and this (the hospital) is the Vatican Kingdom." During the periods of increased excitement, she scarcely mentioned her baby son; and, when she did, there was an aggressive element. The psychological mechanism of this psychosis is very obvious. Similar dynamics were described by Zilboorg (see bibliography), Smalldon, and others; so it would be only a repetition of the already known if there were to be a further discussion here of these psychogenetics. The purpose of this paper is to show the organic influence in this psychosis and the response to treatment.

Six weeks after the delivery, during a period when the psychotic symptoms were at one of their peaks, 6,000 units of "estrogenic substances," prepared from prenatal mares' urine (Reed and Carnrick), were given to the patient. She menstruated the next day, but did not show any change in her mental condition; therefore, she was started on insulin subshock treatment. Since the relatives at this time refused to transfer her to a mental institution, deep shock treatment was not possible. The young woman showed a gradual temporary improvement with subshocks; but, after two weeks, all the psychotic symptoms reappeared suddenly. Then, the family agreed to mental hospital care. While she was again under sub-

shock treatment, she improved for a few days. Her condition relapsed once more; and, for three days, she was confused and excited as she had been originally. Five days after her first deep shock, she was much improved; and she retained this condition for 12 days, when the same acute symptoms returned. Eight days after she had received estrogenic substances, 2 ampules of 1 mg. estradiol dipropionate each (di-ovocylin), she menstruated and her symptoms cleared up to a great extent. In spite of a continuance of insulin shock treatment, she could not keep the gains made and had two other relapses with periods of definite improvement between. At one time, she improved suddenly on the first day of menstruation. At another time, she showed improvement at the time of the expected menstrual period, although she failed to menstruate. Inasmuch as her improved condition was not stabilized after 38 deep shocks, and as relapses still occurred, two units of progestin were given on the sixteenth day after the first day of the last menstruation, and another two units on the twentieth day. The patient started to menstruate on the twenty-fourth day, this time without return of psychotic symptoms during the following postovulative phase. The same treatment was repeated during the next cycle and then discontinued. Meanwhile, the patient had returned home, completely recovered. After progestin administration was discontinued, she did not menstruate for three months. Finally, she received pituitary gland, desiccated, (Armour), two grains, three times a day, for a month. She menstruated at the end of that month.

In spite of definite advice to the patient and husband, she became pregnant again. To prevent a recurrence of her previous disturbance, she was started on progesterone (Progestin, Lilly) again; and she received 2 mg. twice weekly, beginning with the fifth month of pregnancy. After the delivery, the treatment was continued with weekly injections of 2 mg. for the first four weeks. Later, 2 mg., twice monthly, were given for another two months. The patient's mental condition remained good, none of the psychotic symptoms returned.

For comparison, here are brief notes on the case histories of two other young women. The first of these patients is an unmarried woman, 33 years of age, who exhibited a mild, premenstrual

tension. During the past year, she had developed a tumor the size of a small orange in her right breast. After a few months, the tumor was enucleated. Microscopic examinations showed the presence of an extensive deposit of fibrous connective tissue and no evidence of malignancy. Several months after the operation she appeared worried, tired, irritable, and was preoccupied with fear of having cancer. These symptoms were cyclic in their character, always premenstrual. She developed another tumor of considerable size in the same breast and several small nodules in the other one. After administration of two units of progesterone (progestin), the tumor in the right breast almost completely softened within a week. The nodules in the left breast also receded. The psychic tension, which had coincided with the organic symptoms, had also disappeared. About two weeks after she menstruated, the right breast tumor again became hard, and her psychic tension increased. The symptoms disappeared on administration of two units of progestin. At present, she receives similar treatment every month. Her condition has been very satisfactory; the right breast is quite soft, though a suggestion of scar-like induration exists; while, in the left breast, minute nodules can also be felt. Her nervous tension is well controlled at all times.

In the next patient also, cyclic organic symptoms are linked with a premenstrual tension. Both disappeared on progestin treatment. Mrs. P. L. had been operated on for pyosalpinx at the age of 24. The left tube and ovary were removed. Her convalescence was slow, and it was almost five months before she was able to leave the bed. Recently, at 32, she had become very tense and irritable, and had serious difficulties in her office work. At such times, she was so nervous she dropped whatever she had in her hands. This state of high tension had a cyclic course, starting eight to 10 days before the expected menses. On physical examination, a cystic right ovary was found. This increased in size during menstruation or just before, and decreased after menstruation. Comparatively small doses of estrogen (estradiol dipropionate) did not influence either the physical or the neurotic symptoms, so progestin was given in doses of one international unit (1 mgm.) 14 days after menstruation and, again, one international unit a week later. She showed remarkable "social improvement;" now she was able to do her office work with-

out difficulties; but she was not entirely free from tension. Progestin treatment was continued for four months, the dose and interval changed. With the change of dosage and also of the time of administration of progestin, the period of menstruation could be altered at will from the 27 to 28-day cycle to as short a cycle as 20 to 25 days. Ultimately, it was decided to remove the cystic ovary. This was done nine years after the first operation. At this time, the cystic ovary, the right tube, and the body of the uterus were removed. The patient had an uneventful recovery; she gained in weight and again could resume her work. On examination, the ovary was found to be a cyst of 100 cc. capacity, containing a chocolate-colored fluid. The cyst wall contained little functioning tissue. There was a small corpus luteum present. The uterus was very small; the endometrium showed evidence of ovarian function (proliferating stage).

Soon after the operation, Mrs. P. L. showed evidence of recurring tension, with hot flashes. During these days of tension, her neck showed that the thyroid was swollen. These organic changes lasted six to eight days; and when they disappeared, the psychic tension also improved. Estrogenic substances in form of ketohydroxy estrin (10,000 I. U., Amniotin, three times weekly) only aggravated the condition. As soon as the medication was withheld, she felt somewhat relieved. Under resumed progestin treatment, she greatly improved in her physical and psychic condition.

Discussion

The three patients under discussion show a common underlying factor; the premenstrual exacerbation of their symptoms. The reactions to that disturbance are very different and depend on the basic personality.

In the first case, the writers dealt with a schizophrenic (catatonic) excitement after the birth of the patient's first child. Under insulin subshock treatment, the symptoms subsided temporarily to a great extent—only to return during the postovulative cycles. In Frank's cases the premenstrual tension became relieved only after the patient actually started to menstruate. He explained this by "an increased level of female sex hormone" in the blood before menstruation; and he was of the opinion that this might cause psy-

chic and nervous changes in "labile persons." There is an important difference in the present writers' instance, because the psychotic symptoms on the approximate date of menstruation disappeared, regardless of whether the flow actually took place. Under ordinary conditions, true corpus luteum hormone is always produced by the ovaries during the first four months of gestation. Later, the placenta takes this function over. In the writers' patient, the first manifestation of the psychosis appeared soon after the delivery, at a time when intensive endocrine changes usually occur, namely: a sudden decrease of progesterone, which is increased during pregnancy. From there on, the psychotic symptoms always increased during the postovulative phase, i. e., at a time when the progesterone formation should be increased. There seems to be a lack of sufficient response of the endocrine system in the patient, and a psychosis developed on the basis of her prepsychotic personality makeup.

The writers believe that insulin shock treatment induced the recovery in the patient. The disturbed hormone level (progesterone) coincided with a postovulative exacerbation of the symptoms. As soon as the lacking progesterone was supplied a normal hormone balance was established. It impresses the writers that progesterone could only be of help when the involved centers were already sensitized by the preceding insulin shock treatment.

During the next pregnancy, the writers started to give Progestin in the fifth month of pregnancy, intending to supply the assumed lacking progesterone. The patient's psychosis did not return, although the rate of relapses in similar cases is comparatively high.

The hypothesis presented would have gained greater support if there had been the opportunity for experimental determination of the endocrine balance. It is considered that it could be of great value for the therapeutic approach in schizophrenia if such determination were to be done before and after insulin shock treatment. A comparison of the changes in the endocrine level in successfully and unsuccessfully treated patients, with those without any treatment, would give important hints about supporting the present treatments by hormones. This seems of particular importance if it is recalled that before the introduction of shock treatments the best results in the treatment of schizophrenia were obtained with en-

docrine therapy (see Hoskins, Fischer, etc., in bibliography). A combined approach might increase the incidence of recovery, particularly since there are so many indications that the hormonal level plays a great part in the manifestations of schizophrenia. The frequent coincidence of schizophrenia—at the time of hormonal changes—with manifestations of certain endocrine conditions, indicates this, such as the frequent occurrence of schizophrenia at the time of puberty and the higher incidence of schizophrenia in certain types of body constitution. The observation that schizophrenia has a worse prognosis in women than in men, particularly in women over 30 years of age, suggests a similar basis for the disease.

In the other two patients, the neurotic tension and the organic symptoms appeared during the postovulative phase, also at a time when the production of progesterone is normally increased. Therefore, the symptoms were attributed to a decreased progesterone content. After this was supplied, both the neurotic tension and the organic symptoms disappeared.

Summary

1. The history of a patient who developed schizophrenia after the birth of her first child is discussed; exacerbation of the psychotic symptoms occurred during the postovulative phase of menstruation; and there was sudden decrease of symptoms on the first day of menstruation or on the day when menstruation was to be expected without actually taking place.

2. Both the hormonal change after childbirth, degeneration of placenta (sudden decrease of progesterone level), and exacerbation of psychotic symptoms during the postovulative phase (at a time when progesterone would normally be increased) suggest a disturbed endocrine, probably progesterone, balance.

3. Insulin treatment induced a marked decrease of the psychotic symptoms and sensitized the autonomic centers, possibly involved in the schizophrenic process, for the following progesterone treatment.

4. Progesterone completed the induced mental recovery; but, when it was discontinued, menstrual irregularity reappeared.

5. Premenstrual "neurotic" tension accompanied by organic symptoms in other patients disappeared after administration of progesterone.

6. Experimental determination of the "endocrine balance" is considered of great value for the therapeutic approach in schizophrenia.

Highland Hospital
Asheville, N. C.

BIBLIOGRAPHY

Allen, E. B.: The relation of menstruation to personality disorders. Am. J. Psychiat., September, 1933.

Angyal, A., Freeman, H., and Hoskins, R. G.: Physiological aspects of schizophrenic withdrawal. Arch. Neurol. and Psychiat., September, 1940.

Benedek, H., and Rubinstein, B. B.: The correlation between ovarian activity and psychodynamic process. Psychosomat. Med., April, 1939.

——Ovarian activity and psychodynamic process. Psychosomat. Med., October, 1939.

Davidson, G. M.: Concerning schizophrenia-manic-depressive psychosis associated with pregnancy and childbirth. Am. J. Psychiat., May, 1936.

Everett, John W.: The restoration of ovulatory cycles and corpus luteum formation in persistent-estrous rate by progesterone. Endocrinology, 27:4, 681, 686, October, 1940.

Fischer, S.: Treatment of schizophrenia with glandular extracts. Arch. Neurol. and Psychiat., 90:4, 644, October, 1939

Fulton, J. F.: Central levels of autonomic functions, with particular reference to the endocrine organs. Revue Neurologique, 72:1939, 1940.

Hoskins, R. G., and Sleeper, F. H.: Endocrine studies in dementia præcox. Endocrinology, 13, 245.

Karnosh, L. J., and Hope, J. M.: Puerperal psychosis. Am. J. Psychiat., November, 1937.

Pfister, O.: Supplementary volume, Am. J. Psychiat., May, 1938.

Smith, G. van S., and Smith, C. Watkins: The rôle of progestin in the female reproductive cycle. J. A. M. A., 97:1857, 1931.

Zilboorg, Gregory: The dynamics of schizophrenic reactions related to pregnancy and childbirth. Am. J. Psychiat., January, 1929.

AN HYPOTHESIS REGARDING CYCLES OF BEHAVIOR IN A SCHIZOPHRENIC PATIENT

BY SAUL ROSENZWEIG, Ph.D.

In the course of an intensive three-year study of the possible therapeutic effects of sex hormone medication in a chronic male schizophrenic, it gradually became apparent that this patient's behavior, particularly as regards sexual adjustment, went repeatedly through a fairly well-defined cycle. The cycle appeared not to depend upon the medication, since it could be observed in control periods; but the medication did serve to accentuate the phases and make them more discernible. Each phase lasted from a day or two to as much as a week.

In the first phase—arbitrarily delimited in part but marked also by certain objective features which will be described later—the patient showed clear signs of heterosexual interest. He became very friendly toward female nurses and other women who worked on or passed through the ward and tried to embrace, kiss or fondle them. Occasionally he became rather obnoxious on this account, although it was rarely that he continued his attentions if reproved. A second phase, which followed directly, was ushered in by irritability, moroseness, unfriendliness and, in some instances, outbursts of extreme aggressiveness. This hostility was usually expressed toward some male—an attendant or fellow-patient—whom he would strike or threaten. His language became profane and noticeably included homosexual epithets such as "fairy." Now and then sedation became necessary.

The third phase of the cycle was characterized by manifest homosexual behavior toward fellow-patients or similar but milder behavior toward some attendant on the ward. When a patient was the object of these advances, one with strong homosexual tendencies was usually involved. Occasionally the very same patient attacked in the second phase was the object of these attentions in the third. The fourth phase was never so clearly delineated as the others and often merged with the third. In so far as it could be demarcated, it might be characterized as exhibiting a confused, apparently aimless and cloudy state of mind in which the patient appeared to be

groping. He tended now toward a religious orientation and sometimes read silently from a hymnal or similar religious book which he carried in his pocket. As this cloudy condition began to disappear, heterosexual interests revived; and the cycle began again.

The observation of this series of periods was made without preconceived ideas. In fact, for a long time after the empirical findings, it seemed difficult to account for the cyclic succession. From closer study of the features of each phase, a psychodynamic hypothesis becomes possible along the following lines.

The patient's heterosexual interests may be taken as the starting point because they presumably represent the normal adjustment in the Oedipus situation. His heterosexual tension mounts as it persists without adequate discharge. Tentative reaching out toward females occurs but is not encouraged. Occasionally he is even reprimanded or threatened, so that not only does his frustration increase with time, but also his anxiety grows regarding possible punishment. The aggressiveness of the second phase may thus be interpreted as a reaction to both the heterosexual frustration and to the anxiety from anticipated punishment which is characteristic of the first phase. While it is difficult to decide which of these two factors plays the greater rôle, it is concluded that the second is the more important because the patient's hostility is hardly ever directed toward females. If it may be supposed that the mother or sister was the original object of his heterosexual interests as represented in the first phase, then the prototype of the male against whom he expresses hostility in the second would be the father. A male attendant—the immediate disciplinary authority on the ward—would be a natural surrogate. It could thus be maintained that the fear of punishment from the father for making advances toward the mother originally led to an offensive defense. The aggression in the second phase would now be a similar anxiety-response directed toward surrogates. It is not suggested that the frustration which the patient experiences in his futile heterosexual advances plays no part in the subsequent aggressiveness, but the choice of males for his hostile impulses indicates that he is reacting primarily to a fantasy of threatening rivals.

The third phase, in which homosexual behavior predominates, may be interpreted as signifying that, despite the aggressive de-

fenses, anxiety finally prevails and induces submission to the father or father surrogates. In other words, the patient gives up his heterosexual claims and assumes a submissive homosexual rôle toward his rivals. This step would effect the typical neurotic compromise of reducing anxiety by eliminating competition and at the same time providing a measure of libidinal gratification. But new conflicts supervening, the patient cannot embrace the solution with the full sanction of consciousness. The instability of the adjustment is shown by the intermingling of the third or homosexual phase with the fourth or clouded one. Thus, as anxiety gradually diminishes, he returns from the confusion of the final phase to a new beginning of the cycle.

The noteworthy point would then be that the cycle as interpreted recapitulates in miniature the ontogenetic development of the paient during his early life.

Such historical material as it has been possible to obtain, though fragmentary, supports this view. The patient is very strongly attached to both his mother and sister and frequently confuses them. Though the confusion is facilitated by the identity of their given names, he appears, moreover, to foster it with a certain amount of positive satisfaction. The following frankly erotic letter which he wrote during a period of considerable sex hormone medication to one of these Helens—he addressed the envelope to Mrs. but used the first name in the salutation—demonstrates his inclinations.

"Dear Helen;

"How are you my sweeter than sweet I would like to be home to see you as soon as possible and to be perfectly Frank with you I don't mind if I stay home for good once I get paroole a house is supposed to be used for a home to live in. It will be nice to be home with you so we can cudl coo pet and be christianized.

"If theres sickness in the home people can be kept away neighbors and the like

"And beside that married people can live with Each other for keeps have children and be respected of them to say adieu to Brodway would be early in life.

"Archilles thus the king of Men addressed

"Maybe I may be able to stay home for good a married Man could if he had that responsibility you'd be a sight for sore eyes.

"It's beutiful old place the hospital set in the hills the eternal side seems to have arised for us so it Wont be long now

"If I could get parole immedialy I could be home for Week Ends at least Social life at its best was never like this Most of the Nighbors have gone south West to the Mountains for the dark Winter night of which we think The Hospital has its use's and beyond that it cannot go they do all kinds and sorts of Work here the patients arn't so badly hurt or sick or deformed if they ain't dead or dying or blind deaf and dumb and perhaps they have a thought for themselfs in here in that occasion maybe arise some day if their not insane.

"Well I hope the children are doing nicely fat working like a twelve ton truck team up and they bein clicking ever since that day in my mind eye I think so side crouch body lift airplane whirl and slam.

"About coming home is my only worry is that I might not go away for no amount of money under the sun or over it because I kin do it

"We do some work but not all of it bell Hops Butler Vallee and Forget me not old hundred I am not likly to forget my friends in hurry they were legion and beside I can remember them I we or they didn't all ways thinkso I make my bed in sheal be hold thou art there if I dwell in the utter most debts of thesea thou art there with lots of love and kisses your's

"truly Hector L— M—

"PS Hello ok."

This letter plainly reveals the patient's erotic fantasies regarding mother and/or sister. A blending of the preoccupations with religious trends is indicated by the word "christianized" in the first paragraph and the Biblical quotation with which the letter ends. The reverse of the shield—rivalry with the father—is, however, also represented in the associations. The words "Archilles thus the king of Men addressed"—taken from "The Iliad," which the patient read while in high school—appear to have the function of reminding him that he is "Hector" (the patient's given name).

Since in the epic it was Hector's dead body that Achilles dragged around the walls of Troy, the interpretation may be hazarded that when in the patient's adolescent fantasies the Oedipus complex loomed large, it was the "king of men"—the father—that he feared. From other material, it is evident that the patient regards his father as lacking in initiative, stupid and somewhat ridiculous —an attitude which may be intended to reduce the anxiety resulting from rivalry.

Evidences of homosexuality in the patient's adjustment to his family are prominent. He is known to have had homosexual experiences with one of his brothers. The unnatural deaths of this brother and of another within the same year played a decisive rôle in precipitating the patient's psychosis shortly afterward. One brother was accidentally shot, the other was run over by a motor vehicle. It was the voices of these brothers which the patient used to hear in the auditory hallucinations of the acute period of the psychosis. It is not difficult to appreciate how these two deaths, especially in the light of the violent mode of their occurrence and their close succession, intensified the guilt which he already entertained concerning his homosexuality by bringing back from repression the aggression for which this adjustment had been a solution. In the context of this intensified guilt, it is equally understandable that one of the first peculiar things noticed about him at this period was an unusual interest in religious reading. It may be conjectured that, had these deaths not occurred when they did, the patient might have outgrown his attachment to his brothers and worked out his libidinal and aggressive problems in a more normal way. But with the catastrophe coming at the critical moment when his fate was so bound up with theirs, the double blow overwhelmed him with anxiety and precipitated the psychosis.

Now, in the hospital, he appears to be repeating over and over in miniature the history of his development as it was worked out on an ontogenetic scale. While, to be sure, representing a regression, his psychosis also exhibits contravalent trends consisting in a compulsive recapitulation of the adaptive stages which eventuated in the collapse—sexual attachment to his mother and fear of his father; murderous hostility toward his father, from which he is forced to retreat into homosexual submission. The extreme confu-

sion of the period of psychotic onset is represented in the fourth phase of the cycle, with its clouded consciousness and groping disorientation. Detailed observation and interpretation thus transform a seemingly random variability into an orderly succession of events in which the psychosis appears as both a final ontogenetic adaptation and as a résumé of earlier ones.

The sex hormone medication the patient was receiving had little other effect than to intensify the phases of the cycle and throw them sufficiently into relief for clear observation and description, just as certain stains increase the visibility of bacteria under the microscope.

The generalization of the present observations must obviously await further study of psychotic and psychoneurotic individuals. However, certain confirmatory formulations are well established in the psychiatric literature. As regards psychosis, cyclical recurrence is the basis of the manic-depressive category. In the psychoneuroses it has been shown how patients gravitate repeatedly to certain social configurations. The interpretation of the present schizophrenic case adds a further variation by pointing to the insistent recurrence of temporal configurations.

Worcester State Hospital
Worcester, Mass.

A CLINICAL EVALUATION OF HYPOGLYCEMIC AND CONVULSIVE THERAPY

BY SIDNEY J. TILLIM, M. D., AND MILDRED T. SQUIRES, M. D.

Evaluations of insulin, metrazol and electrotherapy have been largely concerned with statistical data. The results of these efforts have led to conflicting opinions. The cases treated by these modalities are not comparable with non-treated "parallel" cases. Many psychiatric entities are involved, with little accurate knowledge of their nature as diseases. Schizophrenia alone represents many gradations and types which cannot be judged as to cause, quality or prognosis. Very little is known about the effects of these therapies upon the organism as a whole, the brain in particular, and the secondary results of these effects. There are too many imponderables for reliable statistical conclusions. For an empiric treatment to be fairly judged there must be a clear understanding of the disease and a reasonable working hypothesis of the *modus operandi* of the therapeutic agent. This necessitates a definition of terms used in reference to such a treatment. The disease entity must be identifiable in successive cases, and some agreement must exist as to the nature thereof.

The purpose of this communication is to present a clinical rather than a statistical judgment of these therapies. It is based upon over four years of studied experience with insulin and metrazol therapy in the treatment of psychoses, and the use of hypoglycemic therapy for narcotic addictions and neurodermatoses.[1-5] More than 150 patients have been treated in a private sanatorium.

The use of the term "shock therapy" to indicate hypoglycemic and convulsive treatment is a misnomer and misleading. It was introduced originally for want of a more descriptive term, and before a working hypothesis about the nature of the therapy was formulated. It led to many unrealistic formulations. Sakel[6] envisioned an onslaught upon the brain, hypoglycemia as the "infantry" and convulsions as "artillery" attacks. (At least one patient has referred to the latter as a "blitzkrieg.") Sakel hoped to establish that mental illness is "an expression of dysfunction of an injured organ," with "normal" and "pathologic" pathways in the

brain. Adolf Meyer[7] can see the "shock experience" as "breaking up the various deep frustrating states in what we call schizophrenia." Jelliffe[8] finds the death threat during hypoglycemia "forces a definite withdrawal of libido from the aggressive, hostile anal, oral and other negativistic behavior patterns." Schatner[9] says "insulin shock therapy is psychological treatment, although it produces short-lived organic changes." Friedman[10] writes of his camphor and metrazol treatment, "We are treating the disease entity, schizophrenia . . . with a regime which produces profound irritation of the central nervous system." Larkin[11] can avoid difficulties in awakening patients from hypoglycemic coma by mothering them as one would babies. He states "Each patient has one of the nurses or myself as mother surrogate . . . It is of the greatest use in the apathetic type of patient." An accidental situation of transference to an excellent nurse almost lost the writers' hospital her services—just the persisting of a psychotic's misunderstanding. These theories and many others contribute little to a reasonable appreciation of what the treatments do to the patient or the psychosis.

"Shock" is not an essential element of the treatments. It is an undesirable component to be avoided. Shock is medically defined as "a profound mental and physical depression consequent upon severe physical injury or an emotional disturbance." No such experiences are encountered with insulin or electrotherapy. Metrazol and camphor-induced convulsions in conscious patients produce horrifying experiences, especially if full convulsions fail to take place. It is generally accepted that metrazol injections which fail to produce convulsions are harmful and can cause relapses in previously improved patients. Such unfavorable reactions are more likely to occur in patients with paranoid psychoses. Yet, relatives want their kin shocked; physicians want their referred patients shocked; and, with the advent of the machine for electrically induced convulsions and the facility of its use, patients are being shocked in and out of hospitals, in offices and out-patient clinics. The term shock should be eliminated. The designation of the treatments by their unquestionable action upon the patient, such as hypoglycemic and convulsive therapy—as fever therapy is designated for its action in the treatment of paresis—would tend toward es-

tablishing greater uniformity of appreciation of what these treatments are.

Another misapprehension is the assumption that hypoglycemic and convulsive treatments "cure" schizophrenia and other mental illness, that is, eradicate diseased conditions of the brain. This is an unwarranted assumption. It implies a focal condition to be hammered, cajoled, frightened or "shocked" back to normalcy. Present day knowledge does not justify an assumption of an organic disturbance in the brain to explain the nature of the functional psychoses. The evidence points to the conclusion that these psychoses represent total reactions involving the vascular system, glandular activity, the vegetative nervous system, the eliminative organs, as well as the brain. The phenomenal transformations, physical and mental, in catatonics confirm this. The physical transformation in recovered or improved cases of depressions is another instance. In depressed patients, evidence of physical improvement is often the first sign or promise of clinical improvement in the mental status. In spontaneous remissions, there is always a simultaneous improvement in body tone. The order of change may be debatable in these cases. However, patients who are in remission or are greatly improved after hypoglycemic or convulsive therapy—particularly after the former, which acts on the patient more gradually—first show some physical signs of improvement. Not all cases so benefited show betterment in the mental sphere. Human physiology is a complex working organization with many interdependent departments. Dysfunction in any one of these may severely disturb the efficiency of the whole organism. The effects of improper functioning of the thyroid, pituitary or gonads are well known. The ill effects of mental and nervous tension upon physiologic functions are generally admitted; and, conversely, successful psychotherapy relieves such ill effects.

The purpose of this paper does not permit further elaboration upon the nature of the functional psychoses, except to add briefly several authoritative opinions. Singer[13] is of the opinion that schizophrenia is primarily a dysfunction of the autonomic nervous system. Anderson[14] states, "we can no longer conceive of any effect on the visceral and vegetative life of the organism that is not in some way reflecting itself in the emotions and behavior of the

same organism." Angyal, et al.,[15] point to the impoverished and diminished intensity of living common to schizophrenics, their lowered basal level of physiologic functions. Both Anderson and Angyal, et al. are convinced that schizophrenia is a "psychobiologic" rather than a purely psychological withdrawal. Hypoglycemic and convulsive therapy do not "cure" the minds of psychotics. They primarily benefit patients through their influence upon physiologic functions. They cannot restore every dysfunction which may impair mental efficiency.

What hypoglycemic and convulsive reactions do to the human organism to produce favorable mental changes is still debatable. There are considerable observations about the hypoglycemic reaction, but few about the convulsive reaction because the latter is of such short duration. It may be accepted that neither produces the clinical improvement through direct action on the brain. Only in a few instances, is the improvement due to an influence upon the psyche of the patient. These few instances can be granted only for some hysterical reactions simulating psychoses. For such cases, it is conceivable that remission may result from a vital interruption in the trend or flow of the illness through profound unconsciousness, much in the manner of a general anesthetic or narcosis which "cures" a psychosis occasionally. Profound emotional upheaval or an unanticipated physical injury are similarly capable of producing sudden "cures" of psychoses. In these cases, the curative value of shock must be granted. The case of a successful attorney is recalled. He was married, and had two daughters. At 45, when he was about to be involved in a public scandal, he developed a classical agitated depression. There was little doubt about the diagnosis, as an insurance carrier was desirous of voiding its contract and had him examined by many psychiatrists. After 13 and one-half years without any essential change in the clinical picture he recovered, apparently under the following circumstances. The wife for years had been squandering most of the large income from the insurance policy. He was rarely visited more than once or twice a year; and his daughters did not see him at all. He was told that his wife had been living extravagantly and was planning to remarry; and about this time, his favorite daughter, who was soon to be married came to see him. For the first time, he was

able to sit still during a visit; and a few days later, he allowed the physician to talk with him without trying to break away and without cursing under his breath. Soon, he was trying to regain the proper use of his facial muscles and the use of his hands. Throughout his illness, his hands were clenched, and his face showed hostility, fear and revulsion. He recovered to a hypomanic level which permitted his parole from the hospital. In less malignant cases of this type, recoveries have been made through shock treatment.

Aside from patients benefiting from shock or from being rendered unconscious, the overwhelming majority of patients improve or enter remissions through improved physiologic functioning. The brain is an organ, subject to the rules of metabolism and nutrition, as is any other organ in the body. Though it primarily feeds on carbohydrates, it can draw on stored foods in other organs and convert them to its own use. It requires an adequate oxygen and blood supply. The supply of oxygen and the flow of blood are in a large measure regulated by the autonomic nervous system. Physiologic activity and emotional disturbance together or independently influence the regulatory functions of the autonomic nervous system. Evidence of such disturbances in various forms is observable in most psychotics. An induced convulsion has a powerful stimulative effect upon the sympathetic nervous system. Since it has but one qualitative action, its physiologic influence is only likely through its effect on the sympathetic system. The source of the convulsion is immaterial.

Hypoglycemia affects the autonomic nervous system in both its branches, depending upon the depth of the hypoglycemia, adrenal activity, and other factors which are not yet clear. Gellhorn's[16] belief that hypoglycemia acts through an induced anoxia does not hold true in all these cases. Anyone familiar with this form of therapy knows that at different times there occurs in the same patients dominance of either the sympathetic or the parasympathetic branches of the autonomic nervous system. The "wet" and "dry" reactions are examples of the separate activities. The possible symptoms of a hypoglycemic reaction are sufficiently well known and are too numerous to review. The multitude of modifications of Sakel's original hypoglycemic therapy shows the adaptability

of the treatment for the varying needs of different patients. Many variations of hypoglycemic therapy have been described, and many more will probably be evolved as more is learned about specific application for special cases.

The benefit to physiologic function and consequent improved mental function has been recognized by many observers. Cowie et al.[17] long ago observed diabetic children to show improved mental states after treatment with insulin. Wortis,[18] in a review of hypoglycemic therapy before Sakel, mentioned several workers who believed their occasional recoveries resulted from favorable physiologic effects. In another publication he stated "insulin shock improves metabolism in the central nervous system by directly or indirectly stimulating carbohydrate consumption." Ziskind[20] obtained mental improvement in a 60-year-old arteriosclerotic patient with dementia and in a 26-year-old patient with chronic ulcerative colitis. He believed this resulted from an improved cerebral metabolism, and suggested that this may be the mechanism for improvement in schizophrenics. Those who believe that in schizophrenia there is a disturbance or dysfunction of the autonomic nervous system should recognize the potential benefit to patients from hypoglycemic therapy. Gellhorn[16] has made the statement that "all successful treatments of schizophrenia produce stimulation of the sympathetico-adrenal system."

Illustrative Cases

Three cases will be discussed to demonstrate the principle that patients require different intensities and modes of treatment to restore mental efficiency. Failure to obtain mental improvement is probably due to unsuccessful adjustment of autonomic function, either by failure to influence the existent imbalance of function, or inability to stabilize the balance or near-balance, where such is obtained. The problem of why certain types of mental depression fail to recover either with hypoglycemic therapy or convulsive therapy will make a subject for another communication. Suffice it to say at this time that these individuals probably have more on their minds than a "shock" can divert, and hypoglycemia or a convulsion cannot settle the patient's difference with the outside world.

Three illustrative cases are presented—only briefly—as representative of those showing need for flexibility and for modification to suit individual patients in the application of hypoglycemic and convulsive therapy. The individualization of the treatment, according to clinical need or to the patient's response, is essential for an intelligent use thereof. To speak for a preference of one or the other; or to abandon entirely one form of treatment for another, as some hospitals have done; or to prefer indiscriminately one type of therapy because of facility in administration, because it can be administered in the physician's office, as some believe, is proof of need for a better appreciation of these modalities. It seems late in the day for physicians to ask "How many units of insulin did she (or he) require?". . ."Did you have to give a big dose?" when it should be clear that it isn't the "dose" which matters but rather the patient's physiologic response regardless of dosage. We should be well past the stage of academic controveries over ambulatory vs. nonambulatory insulin and over petit mal vs. convulsion therapy. It is time to begin thinking of these therapies in terms of qualitative and quantitative measures as they affect the individual patient.

Case 1. A single woman, aged 26, had been mentally ill five years when admitted to the Long Island Home in January, 1939. At the end of three years in an earlier hospitalization, she had had seven weeks of hypoglycemic therapy according to the method of Sakel and was paroled as improved in November, 1937. Five or six months before admission to this hospital, she began reversion to her previous psychotic behavior. During the last weeks at home, metrazol convulsions were given until hospitalization became imperative. She was dilapidated in appearance, emotionally dissociated and autistic; she misidentified, was hyperactive, destructive and assaultive. Ten weeks of hypoglycemic therapy, with 24 deep comas and four convulsions induced during her hypoglycemic states, produced a 16-pound gain in weight but no mental improvement. In November, 1939, she was started on another course of hypoglycemic therapy with the intent of inducing prolonged comas; that is, the treatments to last seven or eight hours or longer occasionally as the patient's physical status permitted. The comas were kept light by fractional administration of glucose, 10 to 15 gm.

by gavage, or 3 to 5 gm. intravenously. She had 36 comas in eight weeks of treatment. When she was paroled in January, 1940, her father said the patient's mental health was better than at any time in six years; she was later reported to be fully recovered. She was married in June, 1941, against medical advice. She was separated from her husband a few weeks later because she had been married off to a "good-for-nothing" distant relative who was only interested in the dowry. She has remained well despite this experience.

Case 2. A single man, aged 32, diagnosed dementia præcox paranoid type, was overtly ill for two years when he was started on a course of hypoglycemic therapy. He had 51 treatments including 42 comas. He was very much improved, but showed signs of relapsing within a week after the termination of the treatments. Four metrazol convulsions were then induced. These seemed to have stabilized the improvement, and he was released from the hospital shortly afterward as very much improved, free from his paranoid delusions and tractable. He has been out of the hospital and gainfully employed for nearly four years (46 mos.). He still shows some schizoid traits, notably his refusal to renew his interest as a violinist, whereas he had been a high ranking professional performer. Since his hospitalization he has worked as a printer's apprentice and more recently has wanted to be a salesman.

It is not common to use convulsive therapy to stabilize the improvement obtained with insulin treatment; but it has been used successfully on a number of occasions. It is more usual to employ insulin therapy to stabilize improvement obtained after a course of convulsive therapy.

Case 3. A 57-year-old wife of a rabbi was in a state of paranoid agitated depression for approximately seven years when treatment was started. She first showed signs of her illness late in 1933, when she thought people talked about her morals and chastity. In January, 1935, she was hospitalized after a suicidal attempt. Soon thereafter, she became increasingly restless, agitated, resistive and at times assaultive. The clinical pattern of her behavior had a very close resemblance to that of the attorney described earlier in the paper—as to posture, facial expression, response to approach and the restless activity of pacing in a restricted space or dis-

tance. In 1936, a course of amytal narcosis had produced only a temporary abatement in her agitation. In February, 1940, she was started on a course of hypoglycemic therapy. She was treated for 11 weeks and had 29 comas and five metrazol-induced convulsions. The convulsions were superimposed upon the hypoglycemic reactions during the last five weeks of the treatments, when no improvement was developing from the insulin treatments alone. She has now been home over two years and a recent letter from a son, who is a physician, reported her in excellent health mentally and physically.

Comment

In furtherance of the thesis that hypoglycemic and convulsive therapy produce clinical improvement in psychiatric disturbances through their physiologic effects, a few observations on matters distinct from the radical form of hypoglycemic therapy are in order. Bennett and Miller[21] used sedative doses of insulin in 125 acutely disturbed psychiatric patients. They observed that manic excitements could be controlled without any other sedation within an average of 36 hours. Recent cases of schizophrenia, manic-depression and other depressive states benefited from a mild form of hypoglycemic therapy. All their patients improved markedly in their physical status. Polatin et al.,[22] reported favorably on the use of what they called "ambulatory insulin therapy." Most workers have observed the impressive improvement in the skin and general body tone of patients, treated with insulin. The results observed in the treatment of narcotic addicts during their period of opiate withdrawal,[5] and the results in cases of neurodermatitis[4] are only explainable on a physiologic basis.

Why some patients respond better to one form of therapy than another, and why some do not respond at all are questions still a closed book. The suggestion that the secret lies in an improved balance of the autonomic nervous system, adequately stabilized, is based on the present state of knowledge and is supported by much clinical evidence. Within the experience of the present writers, it has been demonstrated that certain types of depressions respond sooner with convulsive therapy than with insulin. Other types respond slowly but do better with insulin therapy. Depressed patients with hostile paranoid trends react badly to metrazol therapy.

These differences in reaction may be entirely due to the individual prepsychotic personality or to the malignant natures of the hostilities underlying the psychoses. In schizophrenics, these factors are not so apparent, and the tendency to reach a working physiologic level within the limitations of their illness—as in the case of the stabilized or slowly deteriorating schizophrenic—may create an irreversible condition. When such irreversibility is once established, our present means of treatment must fail. The diagnostic aids of the Rorschach method[23] and of sodium amytal narcosis[24] should prove helpful in weeding out these irreversible cases. However, these tests should only be used in definitely doubtful cases—of which there are many. Far more helpful is the clinical experience and judgment of the therapist as to whether the prospective patient's illness is still in a state of flux, with the individual fighting against its domination, or whether the total personality has succumbed to the disease. Probably the most serious error of statistical evaluation is the failure to exclude from consideration those patients who were treated for one reason or another, but whom no human effort could change. There is no doubt that hypoglycemic and convulsive therapy have established a well-earned place as useful forms of treatment of many psychotic states. Properly applied, as to mode and measure, their physiologic effects aid materially in restoring mental efficiency.

Conclusion

Statistical evaluation of hypoglycemic and convulsive therapy is misleading because it deals with too many variables and some unknown factors. The use of the term "shock" is inapplicable and has caused needless confusion. The results of these treatments are more reasonably understood on the basis of their physiologic effects. Mental improvement is probably the result of improved general physiologic functioning, in those patients who have not yet reached irreversible stages in their illness.

Long Island Home
Amityville, N. Y.

References

1. Tillim, S. J.: A clinical consideration of hypoglycemic shock therapy. Med. Record, 147:112, February 2, 1938. Ibid. 147:236, March 16, 1938. Ibid. 147:536, June 15, 1938. Ibid. 148:7, July 6, 1938.

2. Tillim, S. J.: Combined insulin and metrazol in the treatment of psychoses. PSYCHIAT. QUART., 14:81, January, 1940.

3. Tillim, S. J.: Observations of insulin sensitivity. Am. J. Psychiat., 96:361, September, 1939.

4. Tillim, S. J., and Squires, M. T.: Neurodermatitis treated with hypoglycemic reactions. Arch. Derm. and Syph., 43:980, June, 1941.

5. Tillim, S. J.: Induced hypoglycemia in the management of opiate withdrawal. PSYCHIAT. QUART., 15:460, July, 1941.

6. Sakel, M.: Influence of pharmacological shocks on the psychoses. J. Ment. Sci., 84:352, 626, September, 1938, London.

7. Meyer, A.: Society proceedings, J. N. M. D., 85:561, May, 1937.

8. Jelliffe, S. E.: Ibid.

9. Schatner, M.: Psychological implications. PSYCHIAT. QUART., 12:1, 19, January, 1938.

10. Friedman, E.: Irritative therapy of schizophrenia. N. Y. S. J. Med., 37:21, 1, November 1, 1937.

11. Larkin, E.: Psychological aspects of insulin shock therapy. J. Ment. Sci., 84:352, 668, September, 1938, London.

12. Stedman's Medical Dictionary, 12th Ed., P. 980, William Wood & Co. New York. 1933.

13. Singer, H. D.: Psychosis and the central autonomic nervous system. J. A. M. A., 110:25, 2048, June 18, 1938.

14. Anderson, F. N.: Some physiologic concepts in mental hygiene. J. A. M. A., 111:2449, December 31, 1938.

15. Angyal, A., Freeman, H., and Hoskins, R. G: Physiologic aspects of schizophrenic withdrawal. Arch. Neur. and Psychiat., 44:621, September, 1940.

16. Gellhorn, E.: Effects of hypoglycemia and anoxia on the central nervous system. Arch. Neur. and Psychiat., 40:1, 125, July, 1938.

17. Cowie, D. M., Parsons, J. P., and Raphael, T.: Insulin and mental depression. Arch. Neur. and Psychiat., 12:522, 1924.

18. Wortis, J.: Sakel's hypoglycemic insulin treatment of psychoses; history and present status. J. N. M. D., 85:5, 581, May, 1937.

19. Wortis, J.: On the response of schizophrenic subjects to hypoglycemic insulin shock. J. N. M. D., 84:5, 497, November, 1936.

20 Ziskind, E., and Ziskind, E. S.: Insulin treatment of psychoses. Am. J. Psychiat., 95:2, 291, September, 1938.

21. Bennett, C. R., and Miller, T. R.: An observation of the treatment of mental cases with subshock doses of insulin. Am. J. Psychiat., 96:961, January, 1940.

22. Polatin, P., Spotnitz, H., and Wiesel, B.: Ambulatory insulin treatment of mental disorders. N. Y. S. J. Med., 40:11, 843, June 1, 1940.

23. Piotrowski, Z. A.: The Rorschach method as a prognostic aid in the insulin shock treatment of schizophrenics. PSYCHIAT. QUART., 15:807, October, 1941.

24. Gottlieb, J. S., and Hope, J. M.: Prognostic value of intravenous administration of sodium amytal in cases of schizophrenia. Arch. Neur. and Psychiat., 46:86, July, 1941.

ON THE RORSCHACH METHOD OF PERSONALITY ANALYSIS

BY ZYGMUNT A. PIOTROWSKI, Ph.D.

"Man is least himself when he talks in his own person. Give him a mask, and he will tell you the truth." Only the strong and the brave can be direct and sincere. Hardly any one can be his true self in his relations with his fellow men. Nearly all of us wear some sort of disguise. Now, what we mean by "personality" is not what a person appears to be but what he really is. In the study of personality, our aim is to get behind the mask. A mask is not a source of energy; its knowledge does not tell us much about the psychological forces which influence the interaction between the individual and the environment. The mask which a person wears is an important part of him but it is not sufficiently revealing to warrant predictions concerning his conduct. "Personality is the dynamic organization within the individual of those psychophysical systems that determine his unique adjustments to his environment."[1] It is the ability to penetrate through the disguises, to describe reliably a sufficient number of the basic psychophysical systems determining adjustment, which assures the validity of the experimental Rorschach[2] method of personality analysis. In the amount of valid knowledge about an individual which it offers, the Rorschach method is—without exaggeration—superior to any other experimental technique of such analysis. This explains its increasing popularity.

In experienced hands, the method can furnish an estimate of the relative intensity and nature of the main psychic forces which determine the individual's action upon the social environment; the intellectual level, the mental work habits; vocational interests; the sensitivity of the individual to environmental changes and his reactions to them; the range and depth of psychological experiences of which the individual is capable; the degree and nature of inhibition which keeps many potentialities undeveloped; the intensity and variety of emotions, of creative imagination; the amount of anxiety and the manner in which it is handled; the conscious control over the thought processes; the effect of affectivity upon reasoning; the degree of the modifiability of the individual and the probable direction of the anticipated personality changes. An im-

portant characteristic of the method is that it helps to ascertain fairly well the degree and the nature of the difference between the basic personality, or the true self, and the manifest, superficial personality, or the mask.

The chief purpose of the Rorschach method is a psychological description of the personality. Insofar, however, as the Rorschach method succeeds in giving an adequate picture of the basic personality, it can be used as an aid in psychiatric diagnosis and in prognosis, as well as in vocational guidance. It is the diagnostic and prognostic results of the Rorschach method which seem to have aroused the interest of the psychopathologist.

The personality traits which are derived from the Rorschach findings are as permanent as the basic personality. The basic personality does not change rapidly in healthy adults—neither do the Rorschach findings. Beck's[3] experience that "mood and attitude apparently affect Rorschach records obtained from healthy adults, but not sufficiently to distort the fundamental pattern" is shared by other investigators. In serious mental disorders, the Rorschach findings change in accordance with the personality changes observed by clinical and other methods. The younger the child, the less permanent the personality traits revealed by the Rorschach method, because the younger the child, the more intense is the process of growth and maturation. In order not to misinterpret the findings of the Rorschach method, one must keep in mind that human personality does not remain fixed, but that it evolves with time. Generally, the variability of the basic personality decreases with age, but important changes can occur as the result of a deep physical or mental trauma. Thus, while the Rorschach method reveals the basic personality, it does not reveal an unchangeable personality.

Rorschach (1884-1922) was a Swiss psychiatrist; he was not quite 38 when he died. His experimental technique was originally devised to clarify and solve a theoretical problem in psychopathology. Rorschach discovered accidentally that the technique could be used as a practical instrument of personality analysis. The material used in the Rorschach examination is very simple; it consists of 10 inkblots mounted on stiff cardboards. Five blots are made in dark gray, two in dark gray and red, and three in sev-

eral colors of the chromatic spectrum. The cards are given to the subject one at a time, always in the same succession, after it has been explained that cards with blots on them will be shown and that the subject will be asked to tell what the blots resemble. The examination should be free from coercion, the examiner preferably remaining silent, writing down the subject's interpretations and making note of any significant observations of his behavior during the examination. After the subject has interpreted all inkblots, the cards are shown to him again, to give an opportunity to the examiner to ascertain how the subject's interpretations should be scored. Thus, the subject is asked to indicate the parts of the blots to which his interpretations refer, and is encouraged, by indirect means, to elaborate ambiguous interpretations. He is not told in advance of the second part of the examination. During the first, or principal, part of the examination the person undergoing the test is allowed to have all the time he wishes to take. (However, a five-minute limit to each card seems expedient.) He should hold the cards in his hands, turning them at liberty. The complete examination of a healthy adult takes 90 minutes on the average. Children and most mental patients require less time because they give fewer interpretations.

When the interpretations have been recorded and scored, their analysis can begin. Each interpretation is scored according to four formal criteria. The first one is that of area. Interpretations are scored according to what part of the inkblot they refer to. They are scored W when they refer to the whole inkblot, D when to a "normal" detail, i. e., one frequently selected for interpretation by healthy subjects, d when to rare, unusual details, S when they refer to the white background of the blot and not to the blot itself. The second formal criterion is that of "determinant." The answers are scored M when the feeling of movement prompted the interpretation, C when the color alone has determined the answer, F when the outline or the form of the blot was the main determinant; c or c′ when the shading was the determinant. Sometimes, an interpretation can be designated by a combination of symbols. It is the custom to give the first place in a combined symbol to the one which is of primary significance. The third formal criterion is acuity of form. Interpretations are scored as good form or bad

form interpretation, i. e., as sharply or vaguely seen, according to whether the forms correspond to that of the inkblots to which they refer or whether they deviate from the shapes of the interpreted blots to an extent not found in records of healthy subjects. Of course if an interpretation does not contain a form element (as e. g., the intepretations based on color alone) or when the form element is of secondary significance, the acuity of form criterion does not apply. The last formal criterion is that of content. Interpretations are classified into groups according to the type of content such as human, animal, anatomical, sexual, architectural, objective (inanimate objects), geographical, abstract, symbolical and other.

When the scoring is completed, the frequency of each of the scoring categories is counted and tabulated and the evaluation of the total record can begin. The tabulation is indispensable, but not sufficient to lead to reliable and valid conclusions. The tabulated data must be interpreted in continuous reference to the complete, original interpretations, to their sequence, and to the variations in the pace at which they were produced. This is because the exact psychological meaning of each Rorschach symbol depends on the setting in which it occurs. Only a synthesis of all Rorschach components can give a valid personality description.

Inkblots had been used before Rorschach in experimental psychology. Rorschach's great and unique contribution consisted in providing an original and ingenious method of analyzing the interpretations of the inkblots. In this system, the conclusions about human personality are based not on the content, but on the formal aspects of the subject's inkblot interpretations. The reliance upon the formal but relatively permanent aspects makes it unnecessary to evaluate the effect of innumerable and uncontrollable factors which influence the content of every human production.

The main methodological assumption of the Rorschach method is that the subject's handling of the inkblots parallels his psychological adjustment to his environment. We can study a person's personality more systematically and more easily by analyzing his interpretations of the blots than by direct observation, at least as far as the basic personality is concerned.[4] The visual images projected into the inkblots are analyzed because they have been shown to correspond to different psychological traits. All interpretive

principles of the method have one aim: to construct a picture of the living personality as manifested through the inkblot interpretations. The methodological processes involved in the analysis of individual Rorschach records were compared to those implied in geometric projections.[4] Others used the term projection to indicate the fact that subjects explaining material susceptible of different interpretations reveal various psychological traits unwittingly; the term, so defined, could be extended to include all methodological procedures which are similar to that of Rorschach.[5] All these "projection methods" have this in common: The subject is called upon to give a definite interpretation of an indefinite situation. However, none of the other procedures (play technique, expressive movement, verbal association) seems to get at such basic personality traits; none has such a coherent system of interpretive principles, as the Rorschach method.

The validity of the Rorschach method depends to a large extent upon the completeness with which the subject can project his personality into his inkblot interpretations. The blots themselves are not conventional forms and are indefinite. Thus, everything that is definite and exact in his inkblot interpretations derives from the subject himself. "Out of ourselves we can never pass, nor can there be in creation what in the creator was not." Another reason for the Rorschach method's validity is that the inkblot interpretations require no conscious effort, but in all cases are produced spontaneously although the subject sometimes struggles with himself as to whether to communicate them. When the interpretations are not reported freely, this is very significant in itself, indicating a marked inhibition of mental productivity. The more the subject struggles with himself as to whether to communicate his interpretations, the greater is his difficulty in manifesting outwardly his genuine feelings and desires.

Still another important reason for the method's validity is what might be called the "discretion" of the technique. Unless the subject has studied the Rorschach system, he is not aware of what he is revealing of himself in interpreting the inkblots. Thus, the individual is saved embarrassment and does not feel uneasy and inhibited. His ignorance of the significance of his interpretations prevents him from trying to force himself to give responses which

might be considered desirable. Finally, a great advantage of the method lies in its capacity for studying the tendency to violent and impulsive emotions, for ascertaining deep and marked anxieties without actually forcing the patient to manifest these feelings during the examination. Although during the Rorschach examination, we do not get the same intensity of emotions that we get in daily life, the emotions are expressed as naturally and spontaneously as in daily life, and the relative intensity of various emotional reactions remains the same.

If the analysis of visual images projected into inkblots is as revealing as it is, visual images must play a very important rôle in mental life and in the process of adaptation to the environment; they must play an important part in the general growth of mental life. The study of the psychological function of imagery is of relatively recent origin. As Bartlett[6] rightly points out, most of the work relating to images and especially to visual imagery was concerned with the epistemological nature and not with the psychological function of images. The chiet concern was to compare images with immediate sensory perceptions on the one hand, and with concepts on the other, but the function of the images in the process of adaptation to reality has been studied very little. Bartlett's searching studies contributed significantly to our knowledge of the psychological function of images and thus incidentally strengthened the theoretical foundation of Rorschach's method. They are all the more interesting because they have been conducted entirely independently of Rorschach's work.

Bartlett[6] (Chapter XI) draws attention to the problems which result from the conflict between our dependence upon the past and our need to adjust to the present: "The capacity to be influenced by past reactions on the whole conflicts with the demand, issued by a diverse and constantly changing environment, for adaptability, fluidity and variety of response. Its general effect is twofold: to lead to stereotyped behavior and to produce relatively fixed serial reactions. Even on a high level of behavior the unwinding of responses in a fixed chronological order is very common. We all tend to drop into serial reactions when we are tired, delirious, slightly intoxicated, or when, for any reason, critical keenness is relaxed . . . To surmount these difficulties, the method of images

is evolved. I do not think that anything very definite can be said as to the exact mechanism of the process . . . In general, images are a device for picking bits out of schemes, for increasing the chance of variability in the reconstruction of past stimuli and situations, for surmounting the chronology of presentations. By the aid of the image, and particularly the visual image, a man can take out of its setting something that happened a year ago, reinstate it with much if not all of its individuality unimpaired, combine it with something that happened yesterday, and use them both to help him solve a problem with which he is confronted today . . . The image facilitates the operation of the past in relation to the somewhat changed conditions of the present. Obviously then, since conditions are always changing, the image must be regarded as biologically useful."

Bartlett is one of the few who have concerned themselves with the problem of studying the function of images in the process of adaptation to reality. One of Freud's[7] great contributions was to demonstrate that a good deal can be learned about an individual from an analysis of his visual images. Freud's most important work in this connection was "The Interpretation of Dreams." While the study of the psychological function of image is a relatively recent addition to psychology, important contributions have already been made. Rorschach, then, is not alone: (1) in discerning the great influence which visual images exert upon the process of adaptation to reality; and (2) in treating the visual images as an abundant source of knowledge about the individual.

Rorschach published the "*Psychodiagnostik,*" a description of his method, its principles and results, in 1921. This book is very moderate in the claims it makes and is limited to essentials. Many of its statements contain implications which would enlarge our knowledge if they were made explicit. The book offers many suggestions for future research. The investigations which have been carried out since 1921 have substantiated the validity of Rorschach's interpretive principles. It has been shown that a correct and skillful use of Rorschach's principles of interpretation gives us a valid and fairly complete picture of a person's basic personality.

The primary function of the method is that of a descriptive and measuring instrument. The secondary functions of the method result from its application in various fields. The best known and most intensely studied applications are in the field of psychiatry, where the method is used as a diagnostic and prognostic aid. The fundamentals of the method were laid in the country of its origin, Switzerland. It was there that Oberholzer[8] made his important discoveries enhancing the usefulness of the Rorschach examination as a diagnostic aid in organic cerebral lesions. Gradually, the knowledge of the method spread; and during the last years, the greatest amount of work has been done, and some of the more important developments in Rorschach work have taken place in this country. The first course on the method in this country was given by D. M. Levy at Northwestern University as early as 1925. S. J. Beck, who became acquainted with the method through Levy, published, in 1930, the first original work done in the United States. Since 1935, Bruno Klopfer has been active in teaching the method in this country. The Rorschach Research Institute was organized by him and serves as a professional organization for those who work with the method regularly. A quarterly, "The Rorschach Research Exchange," is devoted exclusively to a discussion of the method and of its newer developments. The present writer, working in the New York State Psychiatric Institute and Hospital, was the first to simplify the method as an aid in the diagnosis of organic cerebral cases with marked personality deviations;[9] the first attempts to develop the method as an aid both in short-term and long-term prognosis in schizophrenia[10] have been made also in the New York State Psychiatric Institute. It has required years to overcome the skepticism which was aroused, quite naturally, by the seeming disproportion between the great simplicity of the experimental procedure of the Rorschach method, and the depth and scope of the conclusions drawn from it.

Since the method is applied to diverse problems, the impression is sometimes created that too much is claimed for it. However in all the psychological problems of adjustment to reality, in which the Rorschach method is called to assist, there is one common feature: anxiety. Rorschach's method is a very sensitive instrument for recording the quality and amount of anxiety and the manner in

which the individual alleviates anxiety. In the different problems of adjustment then—whether they concern healthy or ill subjects, whether they refer to psychiatric, educational or vocational goals —the Rorschach method performs essentially the same function, that of a measuring instrument of anxiety. Thus, the diversity of purposes for which the method is applied is more apparent than real. It is well known in clinical psychiatry that valid knowledge of the patient's anxiety facilitates arriving at a reliable diagnosis and even prognosis. The Rorschach signs of prognosis in schizophrenia[10] are, in effect, indicators of anxiety: The patient who is more anxious and therefore refrains from actions in which he might fail is the one whose prognosis is the more favorable.

At the present time, the method is being used in numerous hospitals, military as well as civil, in many clinics and research centers. It must be realized however that a period of about two years is necessary to become thoroughly acquainted with the Rorschach procedures and principles, and to acquire the skill needed in making adequate applications of the method to psychopathological problems. At least one year should be devoted to intensive and closely supervised work in a mental hospital or clinic. The Rorschach method is not an easy one, requiring, as it does, sustained mental effort. Only experience under supervision can provide proficiency in the practical application.

An instructor is needed chiefly to point out the many details one must keep in mind in making an analysis of the records; his help is needed also in demonstrating the exact meaning of the numerous concepts in terms of the experimental material, e. g., in showing how to recognize a color shock, a good or bad form, a human movement response and other numerous components. Even the available textbooks cannot be used profitably without the assistance of an experienced Rorschach analyst. By far the best book on the method is still Rorschach's own[2] (its English translation has just become available). The most adequate introduction, especially for those who have had psychopathological experience, is the Rorschach-Oberholzer article[11] which gives a brief description of the main concepts and interpretative principles and demonstrates their application in a case study. Beck's[3] painstaking introduction was written chiefly for those who want to learn the application of the

method as a laboratory psychiatric aid. It is most helpful to those who already possess some experience; the careful and systematic case studies are particularly valuable.

The literature on the method is rapidly increasing. Unfortunately, many authors do not take the trouble to acquire the necessary skill before they start their experiments and before they begin to make claims supposedly supported by their inadequate experiments. This, of course, is unavoidable and has happened with every technique requiring a great deal of experience. Not everyone seems to realize that the Rorschach method is, after all, an aid, that it is not intended to replace psychological and psychopathological knowledge and experience but is intended to supplement it. The main advantage of the technique consists in permitting the discovery of traits which are not clearly evident clinically in the manifest behavior of the subject, especially in cases of agitation, depression, marked evasiveness, and withdrawal.

The scientific function of the Rorschach could be compared with that of a psychological microscope. Just as in pathology the most powerful physical microscope is of no avail unless the findings obtained with its aid are interpreted in the light of histology and histopathology, so the Rorschach findings are not meaningful unless interpreted in the light of psychology and psychopathology. The Rorschach method does not assume any special theory of personality. It cannot explain how the personality of the subject happened to develop into what it is. The Rorschach method can describe the personality only as it appears now. Thus, if psychoanalysis can be defined as a system of genetic dynamic psychology, the Rorschach method can be said to be a system of descriptive dynamic psychology[12] of human personality.

Departments of Psychiatry
Columbia University
New York State Psychiatric Institute and Hospital

REFERENCES

1. Allport, G. W.: Personality: a Psychological Interpretation. Holt. New York. 1937.
2. Rorschach, H.: Psychodiagnostik. 3rd ed. H. Huber. Bern. 1937.
3. Beck, S. J.: Introduction to the Rorschach Method. Am. Orthopsychiat. Asso. Mon., No. 1. 1937.

4. Piotrowski, Z. A.: The methodological aspects of the Rorschach method. Kwart. Psychol., 9:29-41, 1937. Also Rorschach Res. Exch., 1:23-28, 1936.

5. Murray, H. A.: The effect of fear upon estimates of the maliciousness of other personalities. J. Soc. Psychol., 4:310-329, 1933.

—— Horowitz, R. E., and Murphy, L. B.: Projective methods in the psychological study of children. J. Exp. Educ., 7:133-140, 1938.

—— Frank, L. K.: Projective methods for the study of personality. J. Psychol., 8: 389-413, 1939.

6. Barlett, F. C.: Remembering: A Story in Experimental and Social Psychology. Macmillan. New York. 1932.

7. Freud, S.: The Interpretation of Dreams. (Many editions.)

8. Oberholzer, E.: Zur Differentialdiagnose psychischer Folgezustände nach Schädeltraumen mittels des Rorschachschen Formdeutversuchs. Z. Neurol., 130:596-629, 1931.

9 Piotrowski, Z. A.: The Rorschach inkblot method in organic disturbances of the central nervous system. J. N. M. D., 86:525-537, 1937.

10. Piotrowski, Z. A.: The Rorschach method as a prognostic aid in the insulin shock treatment of schizophrenics. PSYCHIAT. QUART., 15:807-822. 1941.

11. Rorschach, H., and Oberholzer, E.: The application of the interpretation of form to psychoanalysis. J. N. M. D., 60:225-248, 359-379, 1924.

12. Levy, D. M.: (Personal communication.)

[EDITOR'S NOTE: The English translation of "*Psychodiagnostik*" and a new English translation of the Rorschach and Oberholzer paper, "The Application of the Interpretation of Form to Psychoanalysis," to both of which Dr. Piotrowski refers in his article, are reviewed in this issue of THE PSYCHIATRIC QUARTERLY.]

FOLIE A DEUX--THE PSYCHOSIS OF ASSOCIATION

A Review of 103 *Cases and the Entire English Literature: With Case Presentations*

BY ALEXANDER GRALNICK, M. D.

PART TWO

In Part One of this paper, the literature of *folie à deux* was reviewed, the usual classifications defined, etiological factors outlined, and certain concepts discussed. A table was appended which presented all the cases which are well reported in English. An extensive bibliography was given. To illustrate the discussion a series of histories may now be related.

Case Material

A Case of Mother and Daughter

This case is related at length to show how the daughter's unconscious identification with, and dependence upon, her mother was translated into a marked similarity in everyday life. Only the mother became a patient.

C. G., the mother, was born June 12, 1874, in New York City. She completed four grades of school and then remained at home taking care of her younger brothers. She was the second of eight siblings and had one older sister. She was well treated as a child. C. G. regarded her mother as good and kind, and her father as a strict disciplinarian, but thought they both treated her fairly. She came of an untainted family, but had one brother who "wandered all over the country" and finally died in a psychotic state due to syphilis of the brain.

In early childhood, she was seclusive and did not like to play with children. Her older sister described her by saying, "I always thought she was queer from childhood." When approximately 18, she ran away from home and lived by herself in New York City. No one knew her whereabouts. She worked as a waitress. She met and married O. D. after knowing him a few months. He was an artist and 10 years her senior. One year after her marriage she had a female child. When this child was one year old, the

patient returned home with her new family and introduced them by saying, "This is Mr. D. and Miss D." Her husband stayed with her a short while and then returned to his native Germany.

About seven years later, the patient went to Germany with her daughter where she lived with her husband. He had had a "nervous breakdown" just prior to her arrival and had been in a sanatorium. She returned alone in 1914; and her daughter followed a year later, while her husband remained in Germany where he died in 1920. The patient left the daughter with her family and supported herself as a waitress. She worked in various parts of the country, sometimes informing the family where she was. When she was 50, she was secretly married to G. G. He was an alcoholic who beat her so that she left him after four years. At this time her father died and a house was left to her in her home town to which she returned. She continued to work as a waitress for another five years and was forced to accept relief when she was 60.

According to her daughter, G. D., the patient "was sick all her life," and had frequent gall bladder attacks. She was a food faddist and drank large quantities of olive oil. She ate little but drank much milk. As she grew older she had frequent periods of weakness and dizziness. A year before her admission to Central Islip State Hospital, she fainted and fell in what was considered "a stroke." She was never operated upon despite all her complaints. She was a Protestant but rarely went to church. She neither drank nor smoked. Her brothers, her sister and her daughter described her as a seclusive secretive, suspicious, stubborn and domineering individual.

Although the exact time of onset of the psychosis could not be determined, it could be estimated that C. G.'s mental illness began in adolescence. She, herself, admitted, "I heard voices all my life." Exactly what these voices said, however, she would never say. Her daughter related that the patient not only heard voices, but also saw faces which frightened her. The daughter was the only source of this information, because C. G. related these experiences only to her. From what she told G. D., the latter could judge that her mother had had hallucinations even before she married. When she was in Germany, C. G. told her husband and daughter that she heard her father talking to her from the United States.

She was very depressed while abroad and attempted to take her daughter to New York without her husband's knowledge. She was apprehended and returned. Shortly thereafter, she took G. D. into a nearby forest and tried to make her drink poison. The daughter became frightened and ran home to tell her father. The patient was found wandering about after three days. It was thought that she had drunk some of the poison. She was hospitalized for a number of months before being returned to the United States.

She stayed at home with her father and spent much time alone in her room. When callers arrived, she quickly retired. What her behavior was like when she was away working and during her second marriage none of the relatives could tell. In 1926, she turned against her favorite brother because he would not give her money. When he became seriously ill later, she would have nothing to do with him. After separation from her second husband, she returned to her father's home in 1928 and nursed him while he was ill. She violently objected to his removal to a hospital, and when he was removed, she left home and refused even to go to his funeral. She always distrusted doctors and refused to be treated by them, but she bought and used medical books written for the laity. When she was taken to physicians by members of the family because she thought she had cancer, she would not take the medicine prescribed. She had such books as, "The Power of the Will" and "The Culture of Courage." She read these and told G. D. that her will was so strong that her daughter could not overcome it.

About five years before her hospital admission, she began to stay at home most of the time, refusing to work. Her brothers mistook this behavior for laziness and refused to help her. She, consequently, turned against them and was forced on relief. However, she refused to sign necessary papers and to apply for old age assistance because she feared her home would be taken away. She explained, further, that she did not trust people because they had frquently broken promises made to her.

Three years before her admission, the patient became much more concerned about her financial condition and thought her house would be taken away for non-payment of taxes. Her brothers refused to help, and she began to starve herself. She vomited frequently and told her daughter she was "having gall bladder at-

tacks." She thought she had cancer of the stomach, as her father had had, and was taken to a doctor. She exhibited mutism and could be examined only with considerable difficulty. The doctor reported her markedly emaciated, with a second degree anemia and vitamin deficiency. She continued to starve herself and ate a little only when coaxed. She began to do much praying. She thought secret service men were "after her" and were "listening in on her mind" with a machine in the next house. She became untidy about her appearance. Once, she awoke during the night and said to her daughter, "Look at the ceiling. Don't you see the fire? Turn on the light."

One month before admission, she heard voices say that Hitler was after her and that she was to be deported to Germany. She said, "Voices say I am a German, and Hitler is coming to get me." She said she saw a ship coming for her and reported seeing herself and her daughter being burned at the stake. Finally, she thought she was being choked and held her hands around her neck saying, "They are choking me." She was hospitalized December 20, 1940, on the family physician's advice and brought to Central Islip State Hospital on an emergency commitment.

On admission she was agitated and apprehensive. She said, "Hitler is going to deport me and my daughter. I have no mental trouble. They think I have because I am so nervous. I should have waited at home for them. They are coming for me. I called Hitler a darned fool when he telephoned me this morning." A complete mental examination could not be done because of her marked depression, agitation and preoccupation with hallucinations to which she responded. She expressed great fear that she was to be taken by airplane to Hitler. She disregarded all questions and said time and again, "They are going to deport me." Physical examination showed her to be poorly nourished; but findings otherwise were essentially negative except for generalized arteriosclerosis. The blood pressure was 155/75; the blood Wassermann was negative.

For the first three months, the patient remained generally in the same condition. Frequently she had to be tube-fed or forced to eat in some way. Sometimes, she expressed suspicion of the food. At

all times, she was seclusive and under great tension. She was invariably oriented for place and person and approximately for time. She admitted persecutory delusions and auditory and visual hallucinations. Sometimes, she said, she thought what she heard was imaginary. She said that she had heard voices since she was a child and had been afraid of everything "all my life." She never would tell what the voices said. She would not admit that her brothers had mistreated her, but told her daughter not to allow them to visit her. On February 21, 1941, she was diagnosed dementia præcox, paranoid.

With the passage of time, she grew a little more informative and corroborated anamnestic material. She related that her husband had been under the care of doctors "for nervousness" and declared that she had been unhappy with him. She admitted that she had attempted suicide while in Germany and added, "I don't want to live now. I am just unhappy and nervous, and I don't want to live." She declared that her daughter had always been a good child who did as she was told. Despite the fact that she gave more information, however, she remained depressed, agitated and apprehensive, but to a less degree. She had great difficulty in concentrating and remained greatly preoccupied with her hallucinations. She continually begged, "Oh, I want to go home. Please let me go home." One year after admission, she was in the same condition.

G. D., the daughter, was born in New York, November 11, 1894. When 12, she went to Germany with her mother where she went through a period of reeducation in the German language. This was difficult for her, and she was driven to study by her parents against her will. She had the equivalent of a high school education which included special training in infant nursing. Her aim was to manage a foundling home some day.

When she was about 15, the mother, as has been noted, attempted to poison her. This was a most traumatic experience, and the girl lived in constant fear thereafter until her mother was returned to the United States. The child stayed on in the care of a pastor, but wished to be with her mother. The latter sent money to her, and she managed to leave the country without her father's knowledge. On shipboard, she fell violently in love with a doctor who was 10

years her senior. Only the intervention of the family prevented her from running away with him.

In 1915, she was married to a young man who was artistically inclined and earned his living by painting. She had one male child, but her marital life was very unsatisfactory, and she left her husband after two years. He obtained a divorce and custody of the child after a few years of litigation. The young woman supported herself as a waitress and domestic and, while working in the former capacity, met an elderly physician to whom she became attached. For a period of seven years, she was not heard from, although at times she was very near her family. When she was not with this physician, she worked and received additional aid from him. Finally, he left her; and she returned to her mother about the time her grandfather died in 1929. Both of them then went to live in the house which was willed to the mother and remained alone there, unless working, until the mother's hospitalization. They were self-sufficient up to 1935.

The time of onset of G. D.'s illness is difficult to determine exactly, but all relatives reported a change in her about six years before her mother's admission. At this time, she turned against one uncle, because of his refusal to give her financial help and became bitter toward him. She turned against friends, too, and suspected that people talked about her and tried to take advantage of her. She avoided her relatives on the street. At the relief office, her suspiciousness was quickly noted. Like her mother, she refused to sign any papers. With the passage of time, she turned against her three uncles and suspected that they might steal the deed to her mother's house. She never talked of hallucinatory experiences.

When she first came to see the writer, she was agitated, depressed and extremely restless. She talked at length in a rapid and excited manner, pacing the floor nervously. She expressed distrust of doctors in general and thought her mother was mistreated. When another physician walked into the room, she thought that he had given a sign to the writer. Often she was enigmatic. When the mother's niece gave the writer further information, she burst into the office saying, "Now don't you betray us."

Up to the time of this writing, one year after the mother's admission, G. D. has visited the patient regularly once or twice a week,

despite advice to make her visits more infrequent. She has consulted the writer almost as regularly, to unfold gradually a vivid story about herself and family. For the first few months, she was excitable and tearful at each visit, but later showed some improvement. Her suspicions decreased, and most of her delusional content became attenuated. She finally took an interest in her home and garden and went to work. The following is a brief outline of her information:

G. D. had always been dominated by her mother who forced her to do things against her will. As a child, she was disturbed by frequent arguments between her parents. Both of the latter insisted that she study, but did not allow her to follow her own inclinations. As she herself put it, "I never wanted to be educated; they wouldn't let me go in the direction I wanted to. I was always under such discipline that it's a relief to be alone. I wanted to be among scrub and stupid people; I'm not clever. My mother was very intelligent."

She frankly admitted that her marriage was primarily prompted by a desire to escape from her mother. She attributed its failure to sexual incompatibility. After a while, she disclosed that her mother had been in love with a doctor and how she, herself, had loved two doctors—one before her marriage and one shortly after her divorce. She never mentioned the similarity between her mother's and her own marital life. She did say though, "I got pulled back to mama," after the second man left her. Then followed 11 years of close association with her dominant and psychotic mother.

With the passage of time, G. D. said that since she had been separated from her mother, she could think for herself and relax. Her actions and mental content, however, belied her words. She disclosed a strong paranoid trend against her uncles, calling them "human tormentors," and she refused at first to let them see the patient. She distrusted them and feared that they would take her residence away. She intimated often that there was a story to be told about them and threatened to put it in the papers. No amount of questioning and listening could elicit what she meant. She told her mother that, if she stopped visiting, the patient was to know that something had befallen her. She was usually suspicious and

evasive although talkative, but occasionally was very "confidential." At such times, most of the pertinent data was obtained.

She suspected her own mental condition and, despite repeated assurances, frequently asked what the writer thought of her mind. She expressed concern that her "mind might snap" and suspicion that the writer thought she was "insane." Several times she made significant slips-of-the-tongue. Once she related that she had told the patient, "The doctor wants to make you well and send us home." At another time, when asked if she were thinking more for herself, she replied, "When I come out, I'm going to think for her." Again, she said during one visit, "I lost 15 pounds since I'm here—since mama is here."

She expressed great concern for the patient and always asked to take her home. Just as frequently, however, she almost pleaded to be told her mother was going to die. She would say, "I know she's going to die; you can tell me the truth; I'd rather know it now. You will tell me that she's going to die." She related plans she had to sell the house and travel after the patient's death. As she put it, "I want to get away from it all."

At present, one year after her mother's admission, the daughter is on good terms with the one uncle to whom her mother was partial, but definitely unwilling to see the others and her aunt. One of these uncles had a cerebral accident; she has become sympathetic toward him; but, nevertheless, she feels that she has a score to settle with him. At the same time, however, she is fearful that she too is hypertensive and may have a similar stroke. She also fears that she may become psychotic and seeks assurance that her mind is well. She is much less suspicious, however, and does not threaten to expose her uncles in the newspapers.

Discussion: In this case the identification of the daughter with her mother is obvious in the delusional content and, more strikingly so, in the parallel course of their lives. She escaped from her father to be with her mother. She, as did her mother, loved a physician when she was single; and she married a man whose occupation resembled her father's. Her marital life was unsatisfactory and, after having one child, she left her husband. Although dependence upon her mother was great, it conflicted with the desire to be independent of her. This was apparent when she visited, ex-

pressing great concern for the patient and yet actually begging to be assured that she would die before leaving the hospital.

After G. D.'s divorce, she did the type of work her mother did. Finally she disappeared for seven years, again aping the mother.

Here, we see the association of two persons in seclusion. They lived as though in a world of their own. Domination of the daughter by the mother is apparent. A "nervous" father and psychotic mother may have played a part in the production of a susceptible, unstable recipient. The other factors, however, seem to be more important.

The Case of Mr. and Mrs. S.

Mrs. R. S. was born in Hungary, August 27, 1900, of untainted Hebrew parentage. She was the third of five siblings. Her education had continued until she was 15. Later, she helped her father in his retail store. When she was 20 years old, she came to New York, where she worked as a domestic and later as a seamstress in a factory. After five years, she returned to her native town where she met and married M. S. after knowing him a few months. She finally accepted him because he was a persistent suitor; and she thought also that with him in the United States she would have a family and friends. Mrs. S. remained physically well until 1934, when pelvic complaints necessitated a perineorrhaphy. In 1937, she had a dilatation and curettage because of menorrhagia which, nevertheless, continued until 1940. One pregnancy had resulted in a male child in 1931. She was moderately religious and was temperate in her habits. She was always a good worker and efficient in the management of her home. She was, however, secretive, seclusive, suspicious, stubborn and domineering. At all times, she had her way with her husband and appropriated his pay envelopes.

In 1932, the family was forced on relief. About this time, Mrs. S. began to have trouble with some neighbors whom she called "Communists." She became quarrelsome, annoying and highly emotional. She told Mr. S. of the friction that she was having with the neighbors; and, a few weeks after she had insisted that they move, she was overcome by gas in her apartment. This was a suicidal attempt, but she and her husband said it was accidental. They stayed at their next two residences for short periods only, because of quarrels Mrs. S. had with neighbors.

At the last residence, to which they moved in 1933, she felt that the neighbors were annoying her from the very start. She noticed that a definite clique intentionally bothered her and pried into her affairs. She thought they talked about her in a derogatory manner. This state of affairs became aggravated for her after she returned from the hospital in 1934. During her convalescence, she thought that they intentionally created a disturbance under the bedroom window and heard them call her "mocky" and "lunatic." She heard them bang on her door, walls and ceilings. Her husband remonstrated with the neighbors frequently when she told him what she thought they were doing and saying. With the passage of time, she reacted to her delusions and hallucinations. She yelled at the neighborhood children, spilled water upon them from her window, and sometimes struck them. She called the neighbor's daughter a prostitute and used obscene language. Several court procedures were taken against her.

Finally, the voices called her names and threatened her life during the day and night. Because of this and the fact that she had been served a summons once more, she decided to commit suicide. After the man who boarded with them left the house, she wrote a note naming her enemies and designating someone to take care of her son. Then she shut the windows and turned on the gas. Shortly thereafter she was found, quickly revived and taken to Central Islip State Hospital, January 2, 1941.

After commitment, she was well behaved and adjusted rapidly to ward routine. At first she was tense and depressed. She was relevant and coherent at all times, and her sensorium always was clear. Insight and judgment, however, were poor. She was untruthful and shielded herself by often repeating that she had never harmed anybody. She talked at great length of her trend and hallucinatory experiences, relating essentially what has been described. When pressed to substantiate her statements she would become upset and say, "Why God punished me so I don't know. Now I see that those who do bad get away with it. If I had been a mean person, this trouble would never have started."

By and large, she was mild-mannered, gentle and sociable throughout her stay. She ate and slept well, and made no complaints or demands. Without being insistent, she asked several

times when she might go home and patiently waited until her case was thoroughly investigated. It was difficult, from her behavior at the hospital, to conceive of her as a domineering, suspicious and self-willed individual. She expressed concern about her son, husband and home, all of which she felt needed her attention. However, when she was told it would be best for Mr. S. to take another apartment, she showed stubbornness, emotional instability and wilfulness. The patient declared that she did not want to move, adding, "They wanted to get me in the crazy house and they want to get me to die. I'm not going to have peace wherever I go. I know I will have trouble as long as I live. They said that when I move they will make my life miserable wherever I move." At a staff meeting, she was pleasant and cooperative, although tense and anxious about its result. She was diagnosed paranoid condition, and it was recommended that she be paroled after a short interval, but only on condition that she go to another residence.

When Mr. S. wrote that he had moved, she went into an angry and vindictive mood. She insisted that he was wrong in changing residences and insisted that she wanted to go back to her old apartment. Now that he had moved, she did not care what happened. She declared that if her husband had been a stronger and more intelligent man this trouble would not have befallen her. When told she could not go home for a short period she could no longer hold herself in check. Triumphantly and angrily, she said she had predicted to her husband what would happen. She had told him that just as the neighbors had had their way in hospitalizing her, so the doctors would have their way in keeping her at the hospital despite any move he made. She declared, "If I only had my way in this thing. Now my whole life is disgraced. Now I don't care what happens. It's the Jews who make the trouble. The Jews always made the trouble for me." She was paroled shortly thereafter on April 9, 1941, and up to the present, 10 months later, she is doing well at home with her family.

Mr. S. was born in Hungary. He was the third of six siblings and came of untainted Hebrew parentage. He had little education, and he worked as a painter to the time of his marriage. When he came to the United States, he adamantly refused to divorce his wife as his sister advised. He said that he loved her very much and

owed her a debt of gratitude for making possible his residence in the United States. He went to work as a painter and was regularly employed until 1932. He was always physically well. He was moderate in his habits and very religious. He was quiet and seclusive and was described variously as "a very fine man" and "a gentleman." Neighbors said her was "nice and quiet" except on several occasions when he was upset because of his wife's behavior.

Mr. S. visited his wife regularly and spoke to the writer at length on many occasions. He said that he always gave his income to Mrs. S. and allowed her to manage things as she wished. He never complained or objected. He related that his mother had always been right in what she did, but his wife had been even more efficient. Once he said, "Doctor, she is always right. I always give in to her. If it weren't for her, I wouldn't be where I am today. She's always right." He protected his wife to the point of being evasive, untruthful and contradictory. However, after many visits, he divulged more details and was less protective. Repeatedly, he described the romantic nature of their marital life, and the excellence of his wife's care of him and of their son.

On his first visit, he was vehement and insisted that everything Mrs. S. had said was true; he wanted to take her home immediately. Mr. S. said he knew this to be so because he, himself, had heard the very same things, and had heard himself called names such as "cow-brain." He told how people pointed them both out on the street, and accused the very same neighbors his wife did. He thought that they were involved in a plot to drive him from his residence. An aged couple who lived above him, he said, "intentionally" arose during the night to make noise and disturb him. He showed no insight at all.

At first, his emphatic attitude and the fact that he declared he was first to notice everything was misleading. It was thought then that he was the dominant personality. He said that when the couple had moved to their last residence, he remarked immediately that the neighbors were against them. Their antagonism, however, definitely increased when his wife returned from the hospital in June, 1934. During succeeding visits, he disclosed his passive personality in relation to his wife, and said Mrs. S. had complained of annoyance from their neighbors at a previous residence fully a

year before. Although he had protected her from one of these, he, himself, did not become involved until later at the home they were in when she was committed. Only then, did he adopt the persecutory trend, and develop auditory hallucinations and ideas of reference.

For a short time after his wife's commitment, his mental status remained the same, but gradually he improved. One month later, he declared that the only annoyance he suffered came from the neighbors above who still "intentionally" arose during the night to "move beds around" in an effort to disturb him and force him to move. He was left at complete peace otherwise. Nevertheless, he believed that everything had happened as he had described it and was positive Mrs. S. had been correct. He thought it best, though, that she should not face the same neighbors again, and consented to move when he found room.

He worked regularly, and moved to a new apartment against his wife's will, 10 weeks after her commitment. He explained his independent move by saying that he had to have Mrs. S. back with him. Mr. S. was sure that everything would be all right at the new residence, but said that if his wife did complain of annoyance he would remonstrate with the neighbors. Should this not aid, he added, he would then move again. He could not see that Mrs. S. might be wrong; and despite his very religious habits agreed with her that "only the Jews" had molested her. As a matter of fact, he said, "only Christians" resided in the apartment house he had chosen, and he felt doubly sure, therefore, that she would not be troubled. He, himself, had had no trouble there. Up to the present, he has remained the same.

Discussion: Here we have the close association of a dominant wife and submissive husband over a long period, with the latter adopting the former's delusional system almost *in toto*. The type of survey made of Mrs. S. cannot give a full explanation for her paranoid attitude. Neither can such a survey show why she picked a particular group of neighbors, without involving everybody she knew. She did give hints that her attitude was in response to a sense of insecurity. Although she considered her husband not very bright and below her station, she married him because his family —if not he himself completely—could offer her a measure of friend-

ship and security. She said always that if he had been a "stronger" person, or if she had had a family to protect her, she would not have been annoyed and committed. The discovery of the basis for this dominant individual's sense of insecurity must await deeper study.

Mr. S. apparently identified Mrs. S. with his mother, and became as dependent upon her as he had been upon the latter and upon other people in general. Although he finally admitted his submission to her, he could not see that she inculcated him with delusional ideas. Neither could he admit that she was wrong. Perhaps, alone, with the passage of more time, he could have gained insight into his situation. At any rate, his attitude toward her made him the proper field in which his wife's ideas could take root effectively. So complete was his faith in her that he even heard the same things she did. He was not hospitalized, but sufficient evidence was obtained to diagnose him paranoid condition, *folie à deux*. Unfortunately, he could not be observed long enough to determine the type—"imposed" probably would be correct.

The Case of Twin Sisters

Miss G. H. was born September 8, 1874, in Ohio. She was the second born of twins, and the third of five siblings. The four sisters of the family were considered "high-strung and neurotic" by the family lawyer, and one of them had had several stays in private sanatoria. The patient was in very comfortable circumstances, and never had to work for her support. She enjoyed a private school education and then studied for the stage, finally taking part in several amateur productions. When an aunt died in 1916 and left her part of a rich estate, she gave up this activity too. She was always physically well, moderate in her habits and religious inclinations. She was Episcopalian.

From early childhood, G. H. and her twin sister, A. S., were inseparable. They went to school together, and lived in the same apartment even when the twin sister was married. When the latter finally obtained a divorce from her second husband in 1918, the sisters lived together again until A. S. died. At all times, the patient was under the complete domination of A. S. This was evident to friends, and was freely acknowledged by G. H. when she came to

Central Islip State Hospital. They made no friends and were very untidy about their appearance, especially in later years.

In 1923, when a newly-appointed trustee assumed control of the estate in which the sisters shared, the patient developed a paranoid trend against him, following the suggestion of her sister. She considered A. S. to be sharp and quick in legal matters, and, after a few months, believed her when she said that the lawyer was withholding money from them. They lived in a distant city and received their monthly income regularly as did the other sisters. Each received the same amount, and no action was brought by the other three sisters to suggest any irregularity on the trustee's part. Although the twin sisters complained bitterly between themselves and to others, they took no legal steps to increase their share.

The status of the patient's trend remained about the same until early in 1940 when one of the other sisters died. This necessitated a new construction of the will, and the twin sisters were asked to sign some legal documents. After much correspondence they signed the necessary papers, only to regret it immediately. A. S. became sure that, not only was the original trustee a thief, but also a second lawyer that the other sisters had hired for advice. G. H. quickly adopted this belief, as well as the other delusion A. S. now expressed—to the effect that the lawyers were now trying to gain control of the estate for themselves. Soon, she, too, believed that the trustee was trying to do away with them by having someone poison them, that a neighbor was spying upon and stealing important letters from them. In every particular, G. H. followed the delusions of her sister.

When A. S. was in a hospital and expressed the belief that her doctor was trying to poison her at the instigation of their trustee, G. H. readily believed her. After taking her regular dose of citrate of magnesia at home, G. H. thought she was poisoned. She quickly went to see A. S. who suggested that she have the medicine analyzed immediately. G. H. then went to Bellevue Hospital where she was detained, and formally committed, after telling the doctors that she thought the trustee was trying to poison her. This occurred January 17, 1941.

At Bellevue Hospital, she was well behaved and discussed her delusional trend freely. Physical examination disclosed her to be

a well-nourished woman with generalized arteriosclerosis and a blood pressure of 155/80. She had an old fracture-deformity of the left elbow, but the physical findings were otherwise negative. At Central Islip State Hospital, she adjusted to ward routine rather readily, and was cooperative in all respects. She discussed her troubles with the writer at great length, and furnished much information about herself and family. She described her sister in great detail so that, with the aid of other anamnestic material, a good picture of A. S. could be fashioned.

Shortly after admission, G. H. admitted that she had been in error about being poisoned. She said that she had been upset about her sister's health and had jumped to a hurried and false conclusion. In addition, however, to the trend already described, she had thought that her sister's doctor had been encouraged by the trustee to do away with A. S. who died on January 19, two days after her own commitment. She thought too that she herself had been "framed" and wrongly committed. What was more, she believed that her trustee wanted her kept in the hospital.

As time went by, she unfolded a vivid story of her relationship to A. S. She related how the two had been inseparable from childhood, and that she herself had always been under the complete domination of her sister. She said A. S. was utterly cruel and selfish, just as she remembered her mother to have been. Once she said of her sister, "She was terrible. I don't know if she was crazy or not. She fought with exeryone in the apartment house. If there was a noise in our apartment, I was dodging the furniture. Everything in the room had to be just as she wanted it. I could never have anything the way I wanted it. She imposed on me something terrible. She had a vile temper. I certainly shouldn't have stood for it. I didn't have money to live alone, but once I did move away, and she moved in right after me." At another time, when asked if she thought her sister a dominant type she said, "Dominant? I wish you could have seen her husbands. They were meek and didn't speak above a whisper. She was very cruel. She was pretty cold-blooded. I don't think she cared for anyone but herself. Very selfish. Utterly selfish. She was very cruel to me. My mother was very selfish, and my sister was very much like her."

Without hesitation, the patient finally described how A. S. had taken the initiative in all matters, and had originated all the trends. She only suspected A. S.'s physician after the sister voiced the idea. When asked who first suspected the trustee in 1923, G. H. said of A. S., "She certainly pointed it out to me. She was smart about those things. I began to believe it a short time afterward." Two months after her admission, her mental status was essentially the same except that she had originated some trends referrable to the hospital and a friend who visited. At a staff meeting she was diagnosed paranoid condition, *folie à deux,* type "communicated." Finally, she was paroled to her own custody, although her ideas were unchanged. She has gotten along well for the past seven months.

A. S. was never seen by the writer, but descriptions given of her by the family trustee, a friend, and the patient, G. H., paint a picture vivid enough to leave little doubt as to her mental status and the rôle she played in the production of the patient's paranoid system. She had a similar education in dramatics to that of G. H. She did not take dramatics seriously, however, and spent much of her time cultivating "Greenwich Village people." At an early age, she was a dominant type, especially in relation to her twin sister. Both her husbands were mild and submissive. The first died after seven years of marriage. She divorced the second because he was unfaithful to her. Although she had lived in Washington, D. C. for 25 years with her sister, neither had a single friend. In describing A. S.'s quarrelsome nature, the patient said, "My sister was a fighter. She fought with everyone in the apartment house and outside too."

A. S. spent her own money, and then forced G. H. to expend hers on A. S. Whenever anything went wrong, she blamed the patient, so that the latter said very little in her presence. Remarks she made about the patient hinted of sexual attentions the patient desired. This led one informant to believe that A. S. was "a pervert who abused the patient." This informant also related that A. S. freely branded everyone she did not like a "Lesbian." The deceased sister was seclusive and suspicious, and always left a message at the hotel desk that she was out to any visitors who might come. Although the patient discussed A. S. frequently, she had

only this to say in her favor: "I must give her credit for fighting for children and animals."

As already related, A. S. took the lead in originating almost all of the patient's delusional ideas. So long as she believed only that the trustee was "crooked," G. H. had no delusions other than this. When A. S., however, developed more malignant trends, her sister quickly followed suit, so that when prominent people died during the presidential campaign they said that "a white powder" had been given to them. Whether A. S. took three tablets of sodium amytal in an attempt at suicide cannot be definitely determined; but at the hospital to which she was removed, she spoke of a "suicide pact" with her sister. This, however, the patient would never confirm.

Upon admission to the Lenox Hill Hospital, A. S. was stuporous and disoriented. When recovered from the effects of the amytal, she was noted to be uncooperative and demanding. No hallucinatory experiences could be elicited. She spoke freely of being swindled out of a large estate by "crooked" lawyers. In one breath, she spoke of having a suicide pact with her sister; and, in the next, said she had to get well in order to get her money back. Psychiatric consultation was sought.

After A. S. told her sister that she thought her doctor wanted to poison her, G. H. discharged him and reported what she had done to A. S. For her pains, she was roundly scolded and forced to apologize to the physician. When the consulting neurologist saw A. S. four days after admission, he reported, "She undoubtedly had some acute episode during which she became incontinent just prior to my coming to the ward." He found her suspicious, noisy, disturbed, uncooperative and resistive. Her skin was cold and clammy, and her pulse was fast and weak. She feared impending death. The consultant thought medical care was of paramount importance at the time. A few hours later she began to pass blood *per anum*. Despite supportive treatment she died about 36 hours after the onset of this condition. The cause of death was reported to be a large gastric ulcer, probably malignant, which was found by an X-ray series shortly after her hospital admission.

Discussion: Here we have the close association over a period of many years of twin sisters. One of them had always assumed the

dominant and aggressive rôle. Her husbands were passive types; one died and the other favored another woman with his attentions. This sister branded all women she disliked as "Lesbians." The other sister was always submissive. She looked upon the first as cruel and selfish, and, in these respects, like her mother. All delusional trends originated in the dominant one and were assumed by the passive sister. Both later were untidy in their personal habits, and could be regarded as "queer." They were seclusive and suspicious.

In this instance, the factors of homosexuality with sadism and dominance stand out. G. H.'s identification of the dominant one with the mother and her dependence on the sister are no less important. Over the long period of years, the first delusions became firmly rooted in G. H. She developed some trends after her sister's death, thus elaborating her original psychosis. Such is typical of the communicated type.

The Case of Two Sisters

The family history of these sisters is negative for nervous and mental disease. Both had little education and had lived in seclusion in one dilapidated frame house for more than 15 years. Both were considered "queer" and wore old-fashioned clothing. They were both unclean in appearance. B. P. was 44 years of age on hospital admission in company with her sister, August 22, 1932. She had become intensely religious 17 years before, thinking herself a prophet. She adhered strictly to the Old Testament, refusing to eat anything that contained "swine's flesh;" and she ate only one meal a day, which consisted of dry oatmeal and vegetables. On Sundays, she prepared nothing. She read the Bible extensively far into the night. About 10 years before hospitalization she began to hear the voice of God say that He was going to bury her in the Red Sea. She also heard music in her left ear and saw angels. When admitted, she was irritable and uncooperative, and besought the Lord for help. She freely admitted her religious beliefs and hallucinatory experiences. She thought that she must follow in the footsteps of Jesus. There was no persecutory trend, except that she felt unjustly committed. She asserted that she had influenced and inspired her sister. On the ward, she was the dominant

personality and acted as the spokesman for both. She was invariably in her sister's company and kept away from other patients. The diagnosis was dementia præcox, paranoid. Physically, the patient was poorly nourished and anemic. She had a rough first sound at the apex and arthritic changes of the hands. The blood pressure was 130/90. On November 26, 1934, she was transferred to the medical service because of bronchopneumonia. She recovered and was returned to the same ward with her sister where there was no essential change. In 1939, the sisters were placed in different wards. At present, B. P. is still delusional and hallucinated. She eats a most restricted diet, and spends much of her time waving to her sister in an adjoining building.

L. P. was 47 years of age on admission August 22, 1932. She had always been considered of subnormal intelligence. Her early life was like her sister's; and both had always been supported by the father. She herself summed up the onset of her illness in this way, "I came into religion through my sister who got it first. I began to hear the voice of God and the angels. I also have visions and hear music in my left ear." L. P. was also poorly nourished and anemic. She had a presystolic murmur at the apex and arthritic changes of the hands, and blood pressure was 150/100. On admission, she was resistive and besought God for help. Her delusions and hallucinations were exactly like her sister's and on the ward she imitated everything her sister did. When questioned, she would say, "You go ask my sister." She was timid and entirely dependent upon B. P. A diagnosis was made of dementia præcox, paranoid. She was transferred to the medical service the same day her sister was, with the same diagnosis of bronchopneumonia. On the ward to which she was transferred after her recovery, she seemed to be more apathetic and dull than the sister. Despite separation from B. P., she maintained her delusions and hallucinations, although they seemed to lose their prominence. Up to the present, she has remained dull, idle and seclusive and has restricted her diet as before. She spends much of her time waving to her sister in the next ward.

Discussion: Here we have a typical case of the psychosis of association. The younger was the dominant personality who developed strongly religious delusions associated with auditory and vis-

ual hallucinations. The older sister was mentally subnormal and passive. She adopted all of her sister's delusions and hallucinations, even hearing music in her left ear. In every respect she followed her sister's behavior. Despite long separation from the active partner, she has remained delusional and hallucinated, indicating that she belongs in the communicated type of *folie à deux.*

A Case of Mother and Daughter

A. B. was born March 26, 1873. The family history was negative. Little is known of her early life. She was married when 26 and had two children, both of whom were graduated from college. She led an unsatisfactory marital life and separated from her husband when she was 41. A. B. was described as a bright, sociable and "high-strung" person. She was considered mentally well until 1916 when she became nervous and irritable. She thought "people were after her" and for a time was able to convince her son and daughter that this was true. She said also that electrical appliances were influencing her. She was first hospitalized in October, 1917, but her daughter took her home against advice in July, 1918. In September, 1921, she suffered a fractured skull when she was struck by an automobile. Between 1921 and 1926, she had six admissions. She always had persecutory delusions, associated with hallucinatory experiences of a derogatory nature. Once she thought that she was made of radium and that a dictograph was in her room. She developed very grandiose ideas and required frequent tube-feeding. Again, her daughter took her home contrary to advice in December, 1926. She had been diagnosed dementia præcox, paranoid.

A. B. stayed with her son and daughter, the latter taking care of her in addition to working. The daughter became psychotic and was hospitalized on January 20, 1929, after which the son took care of the mother. He was forced to have her readmitted in 1933, when she still had persecutory delusions and grandiose ideas. Her illness progressed and at Central Islip State Hospital, to which she came in 1935, she hallucinated and fabricated. She was often incoherent, resistive and inaccessible. She was seclusive and indolent. At the present time, her condition is unchanged.

E. B., the daughter, was born September 26, 1890. She was graduated from college and remained single, devoting much of her time to the care of her mother. She was moderate in habits and was described as a sociable, even-tempered and competent worker. According to her brother, she tired herself taking care of the mother. She was apparently well until June, 1928, when she became fearful that men were following and annoying her. She created a disturbance and once told her brother that she had arranged to commit suicide. She also had auditory hallucinations of a derogatory nature. At the time of her hospitalization in January, 1929, the physical findings were negative. She stated that she had worked very hard taking care of her mother to keep the latter out of trouble. She thought that detectives had followed and threatened her. She heard their voices come through the walls. Her illness progressed, but sometimes she had short periods of improvement. In 1932, she was seclusive, manneristic and silly. She said that doctors had operated upon her "with radium." Her persecutory delusions and hallucinatory experiences had a marked sexual coloring. She involved government officials, as did her mother. A diagnosis was made of dementia præcox, paranoid. Her illness progressed to such a point that she was described as "idle, seclusive and deteriorated." When placed on the same ward with her mother for a short time, she spent most of the day looking after the mother's welfare. Since separation from A. B. she has continued delusional and hallucinated.

Discussion Unfortunately, this is an inadequate story. However, the deep attachment of the daughter to her mother is evident. She took her from the hospital several times against advice and was very solicitous of her. Finally, 12 years after the mother's onset, she herself showed the first signs of a psychosis. It might be that psychotic ideas were previously present. At the beginning, she had ideas exactly like her mother's but later elaborated her own system, although it still contained similar elements. Progress of the psychosis occurred in both cases despite separation. The daughter fits into the communicated type of *folie à deux.*

A Case of Mother and Daughter

G. E., the mother, was 50 years old on hospitalization. She had a negative family history. When 18, she married a man 20 years her senior. Two girls resulted from the union, but her marital life was unsatisfactory, and she divorced her husband after 21 years of marriage. She was moderate in her habits and religious inclinations. She was described as an unstable, extravagant, stubborn, overactive, and suspicious person. For 10 years previous to admission to Central Islip State Hospital, she had been abnormally suspicious, thinking someone opened her mail. Two years before admission, she began to systematize her delusions and became a fervent follower of Father Divine. After an accidental leakage of gas, she thought that gas was being pumped into her room, regardless of where she lived. She thought that she was being spied on wherever she went, and developed abundant auditory hallucinations of a threatening character. She was admitted to the hospital, July 19, 1939, when she was mute and resistive. Tube-feeding was necessary. The physical examination was negative, the blood pressure was 100/65. She was diagnosed dementia præcox, paranoid. Metrazol therapy was begun August 7, and she had 19 injections with nine grand mal and six petit mal seizures. She became neat, agreeable, and cooperative. She gave up or denied many of her delusions, but lacked insight. She was discharged November 5, 1939, and went to South Carolina with her daughter. One year later, a family physician wrote the hospital that she was a little "nervous," but otherwise normal. In February, 1941, however, she was readmitted to the South Carolina State Hospital, where she was described as arrogant, aloof, uncooperative, uncommunicative, and delusional.

D. E., the daughter, was 28 on her admission to Central Islip. Throughout her childhood, she had had a succession of illnesses, and was treated as an invalid. She was very placid, and always stayed with the mother who completely dominated her. When 18, she finished two years of high school, and then worked as a model. She had hypothyroidism and was under treatment until two years before her admission when she stopped taking medication. During this period she was poorly nourished and spent many months in bed. She was moderate in her habits and religious inclinations.

When her mother suggested that they were being gassed, she readily believed it; and she thought she saw gas being injected into the room as a powder. She also became an ardent follower of Father Divine, and thought that she and her mother were being persecuted. D. E. was admitted two days after the mother. She was cooperative, happy, and circumlocutionary, saying that she had come to the hospital merely to keep her mother company. Her sensorium was clear, but insight was absent. She had a basal metabolic rate of minus 35, a blood pressure of 100/70, and a marked anemia. Thyroid extract was given in adequate doses. A diagnosis was made of dementia præcox, paranoid. Insulin shock therapy was begun the same day that G. E. received metrazol. D. E. had 37 injections, and went into coma 26 times, receiving a maximum dose of 100 units. She improved markedly, and took an interest in her surroundings. She denied delusions in the past and present, and declared that she had misinterpreted the leakage of gas. She was protective of the mother, and said that she had always been attached to her. She was discharged, and went to South Carolina with her mother. One year later, the family physician considered her "calm and thoroughly collected." In February, 1941, however, she was readmitted in South Carolina with her mother.

Discussion: This case again illustrates the importance of long association between a dominant parent who eventually becomes psychotic, and a submissive daughter. The psychosis in the mother was apparently of long duration, and the placid daughter was involved only when it became well systematized. The delusions then were almost identical. Despite their being in the same building under treatment, marked improvement took place in the recipient. She probably fits best into the imposed type of *folie à deux.* Unfortunately she was again forced into circumstances similar to those which first produced her psychosis.

A Case of Mother and Daughter

T. M., the mother, had a negative family history and uneventful childhood. She had worked as an attendant in several New York State hospitals. She married in 1912 and had five children. She was moderate in her habits, but suspicious and faultfinding.

In 1919, when 33, she developed persecutory delusions associated with auditory hallucinations of a derogatory nature, to which she reacted. She also became paranoid against her husband. After three short hospitalizations, she was paroled in 1926 and discharged in 1928. In June, 1934, her daughter became psychotic while working at Rockland State Hospital, and was brought home against advice. The mother adopted her daughter's delusions, and the daughter, in turn, adopted those of her mother. Finally, they both became disturbed, and the psychotic daughter called the ambulance for her mother. Physical examination of the latter at Central Islip State Hospital was essentially negative. She was eventually diagnosed dementia præcox, paranoid. Her psychosis progressed, and she developed grandiose delusions. However, the delusions she had adopted from her daughter became attenuated with time. At present, she is still in the hospital.

J. M., the daughter, was an irritable and stubborn child. Later in life, she was seclusive and jealous; she avoided the opposite sex and frequently used obscene language. She completed three years of high school, and then worked as an attendant in New York State hospitals. While at Rockland, in June, 1934, when she was 19, she became irritable and overtalkative; accused a nurse of making homosexual advances toward her. She became assaultive at home and expressed paranoid ideas about her father and the doctors who had treated her. Both she and her mother thought a neighbor was trying to poison her. The mother believed that physicians had mistreated J. M. and that homosexual advances had really been made toward her daughter. J. M. became unmanageable and required admission to another hospital two weeks after her mother. Her physical examination was negative. Her delusions continued, and she displayed manic-like behavior. Her sensorium, however, remained clear. Once, she said that her father had frequently told her that since she looked like her mother she too would become "insane." Shortly after admission, the diagnosis of manic-depressive, manic, was made. At present, the writer is unaware of her condition.

Discussion: Because the information is sketchy, the mother's rôle in her daughter's psychosis cannot be exactly determined. It is likely that J. M.'s psychosis began independently while she was

at work in the State hospital. When brought into contact with her psychotic mother, who was then at home, there was a reciprocal relationship between the two psychotic persons, with an exchange of delusions. The mother accepted the daughter's homosexually colored ideas, and the daughter accepted the mother's trends against the father. Both held other persecutory delusions referable to the home environment. It is interesting that the daughter called the ambulance for her mother. This case illustrates the reciprocal relationship in psychoses, and is a good example of the induced type of *folie à deux.*

Therapy and Prognosis

In *folie à deux,* much the same therapeutic measures apply as in psychoses in general. Unhealthy attachments of children to parents must be prevented by discovering and eradicating the elements which create them. This is no easy task. From the beginning, opportunity should be fostered for the expansion of interests. Improved psychiatric teaching among workers in the social and educational fields, so that they may readily recognize early cases, and the establishment of more mental hygiene clinics are very necessary measures. Agencies should have the privilege of dividing morbid combinations, particularly when one is already affected, just as they are empowered to isolate those with infectious organic diseases. Separation then should be of a permanent nature. Relatives, especially female, should be discouraged from nursing psychotic siblings and marital partners.

Prognosis depends on several factors. It is generally better in the imposed type, but only if separation of those involved is accomplished. The length of association after the onset of psychosis in the recipient is also important. The longer this association, the poorer the prognosis. It is a bad sign if the recipient elaborates the original psychosis and adopts new delusions. In such cases the prognosis is no better than in psychoses generally. We are, then, as a rule, dealing with the communicated type, and if recovery does not take place within six months of separation the prognosis should be guarded. Hayes says the prognosis is better among those with negative family histories.

Mass Psychosis

The subject of mass psychosis is often raised in connection with that of *folie à deux*. Writers have consistently classed the unorthodox behavior of large groups with that of family units. They have particularly done this when the group leader has appeared to be psychotic. Numerous allusions have been made to historical figures. No writer has so much as cast doubt upon the validity of the analogies drawn. Nevertheless, some of these examples need critical examination.

John of Leyden is often mentioned as having been the center of a mass psychosis (Ireland, Peterson). He was an Anabaptist leader who lived in the early sixteenth century, at a time when peasant revolutions were frequent and Luther's reformation was in full swing. There can be little doubt that John was psychotic, but his followers did not partake of his delusions. Although they were led by him, they neither believed with him that they were divinely commissioned, nor did they have hallucinations. Their motives were borne of the harsh realities of life, and they consciously sought something better. It is true that they resorted to violence, but that was not something unknown to the times, nor was it a method from which the opposing Lutherans abstained. The Encyclopedia Brittanica, in describing the Anabaptists, has this to say: "To one who merely looks at the extravagance and lawlessness which appear on the surface, fanaticism and madness, credulity and imposture may provide a sufficient explanation of the whole Anabaptist movement, but a deeper insight will find elements in it which are quite inconsistent with such a supposition . . . One of the most notable features of the early Anabaptists is that they regarded any true religious reform as involving social amelioration. The socialism of the sixteenth century was necessarily Christian and Anabaptist. Lutheranism was more attractive to grand-ducal patriots and well-to-do burghers than to the poor and oppressed and disinherited." Unconscious motives too were no doubt at play, but it is to be seriously doubted that they played the only rôle.

Many references are made to Joan of Arc as having been involved in a mass psychosis with her adherents. According to the Encyclopedia Britannica, Joan had auditory and visual hallucina-

tions, and thought she had a divine mission to establish the rightful French king. Some authorities doubt whether she was psychotic, but that is not the most important point here. In the early fifteenth century it was not unusual for people to believe in divine revelation and, therefore, to accept what Joan said at face-value. Further, when she came forward, the French were already facing the invading English in a bitter clash. Those who fought with renewed vigor behind her did so out of conscious desire to rid their land of the invading armies. If they believed Joan had divine guidance, they were not necessarily psychotic, especially since they neither indulged in the same ideas nor had the same experiences. If the people depended upon her for leadership, it is by no means enough explanation to indict them as mentally ill.

It is surprising to what lengths writers have gone to apply knowledge gathered in psychiatry to the field of sociology. Wilcox, for instance, in discussing a mass movement of his time says, "The latest example of an epidemic of contagious political insanity is seen in the unlawful and extraordinary conduct of the suffragettes." A magistrate described their conduct as "neither polite, politic nor political." These women who indulged in unusual behavior for the purpose of obtaining the vote would no doubt strongly disagree with Wilcox and the magistrate. So would all the women who vote today. From the point of view of psychiatry, we may say that the suffragettes consciously sought something real which was in keeping with the progress of the times. In other words, unlike those involved in *folie à deux,* they had a reality motive, which satisfied the desires of many, in addition to unconscious motives. The ultimate proof, of course, finally came when women won the vote.

Brussel says that there is no reason why we cannot conceive of a "*folie à beaucoup.*" He cites the Charge of the Light Brigade as an illustration in which "500 men ride into certain death with psychotic eagerness" in the wake of their leader. There is reason to believe that the millions of men who are now locked in a death struggle on the battlefields would violently differ with Brussel. The latter seems to the writer totally to disregard the conscious and unconscious motives which impel men generally, to act in such a manner under specific conditions. Such behavior under given condi-

tions seems to be definitely neither psychotic nor the result of an aggressive instinct. Brussel also comments on the tale that the Parisians stormed the Bastille because they were inflamed by notes the psychotic "Marquis" de Sade dropped from it. As a result, he suggests, that they were involved in a mass psychosis, or "*folie à beaucoup.*" But in the first place, historians and sociologists tell us that the French people had more cogent reasons than the "Marquis' " notes for storming the Bastille, symbolic of a tyranny they wished ended. The psychotic de Sade was the least of their concerns. Second, the people neither knew nor accepted his delusions, but did recognize the harsh reality of their own situation. Their reaction was like that of the early Americans who struggled against oppression for independence. Such activity is far removed from what we are accustomed to regard as psychotic.

These examples have been discussed to show that strict analogies between small and large groups may not easily be drawn. Environmental forces influence groups of different sizes differently. Necessarily, then, our standards of judgment should be different. The setting in which the action occurs must not be neglected; for, if it is, what seems to the writer to be the gross misjudgments recounted must inevitably recur in the literature. The unconscious mechanics may be similar in the persons of both groups, but their goals differ. This is a vital difference, because there are conscious elements based on reality motives present in the members of large groups, which are absent in the victims of *folie à deux.* Further, a recipient in a case of *folie à deux* usually elaborates the adopted delusions which are a personal solution both for him and the inducer. This cannot be said about those in large groups who act in an unorthodox manner. Behavior in *folie à deux* may be justly called psychotic, but behavior in large groups may not be so called, merely because it is unusual.

Summary

This paper is intended as a complete review of the subject of *folie à deux,* or, as it may better be called, the psychosis of association. It contains: a short historical sketch; a thorough investigation of the definition and types of *folie à deux;* a complete presentation of synonyms for the entity, and of descriptive terms for the

persons involved. The prominent factors of association, dominance and submission, relationship, prepsychotic personality, sex and age, type of delusion, and homosexuality are discussed. Emphasis is placed on the etiological factors and explanatory mechanisms, including identification, heredity and environment, imitation and sympathy, and shock and strain. Particular attention is paid to treating the subjects of identification, and heredity and environment in relation to *folie à deux.*

Seven cases are presented for addition to the literature. One in particular is described at length, because it illustrates how unconscious identification and dependence may produce parallel lives. In addition to these seven new cases, 96 others have been culled from the literature, and the prominent factors of all are listed in a table for quick review. The findings are then summarized for statistical purposes, and a few striking ones are commented upon. Some space is also devoted to the related subject of "mass psychosis," which is frequently referred to in the literature. The bibliography reviewed in Part One includes all material published in English through the first quarter of 1941.

Central Islip State Hospital
Central Islip, N. Y.

SEMANTIC DEMENTIA AND SEMI-SUICIDE*

BY HERVEY CLECKLEY, M. D.

Disorders of the human organism are manifested at various levels of integration. Similarly, the causes of our disorders are customarily assumed, with differing degrees of assurance, to lie in damage or pathologic change in certain discernible parts of the organism or at certain levels at which it functions.

In the familiar picture of paresis we find damage that is definitely "organic." The brain often shows obvious changes visible to the naked eye. Under the microscope widespread destruction of neurons in the cerebral cortex is prominent.[1] In paresis, such prominent symptoms as poor judgment, faulty reasoning and emotional disorder can be reasonably well accounted for as the result of this neurologic damage.[2] Disorders at a simpler reflex level, such as failure of the pupils to react to light or augmented tendon reflexes, can also be understood in terms of the neuropathology. Other manifestations at a psychobiologic level, particularly euphoria and grandiose delusions, are considered by some observers[3] as compensatory, as arising from the reaction of the total organism to the damage and curtailment of function.

In schizophrenia, the typical manifestations are confined to the level of personality functioning. Silliness, delusions, hallucinations, peculiar postures and grimaces, scattering of thought, inconsistency and poverty in emotional expression are often striking. Little or no disorder is noted at simpler reflex levels. Nor can the clinical findings be ascribed with assurance to localized damage in the nervous system. Although observers in the past have reported discernible pathologic changes in the brain, it is, to say the least, questionable if any such changes can be considered today as established or convincing.† Even if one accepts as established any of the more recent reports of this sort,[5] it is difficult to say if they are a cause or a result of the disorder; and it is more difficult indeed to show how they are causal.

Though, unlike paresis, schizophrenia cannot be satisfactorily

*Read at the Second American Congress on General Semantics, University of Denver, Denver, Colo., August 1 and 2, 1941.

†It is perhaps worth noting here that after all the findings reported and disproved or reported and questioned (Ref. 4), Biggart (Ref. 1) in his recent textbook on neuropathology does not mention schizophrenia.

interpreted today in terms of established neurologic damage, its manifestations plainly constitute a psychobiologic disorder readily demonstrable at the level of logic and judgment or from the aspect of emotional reactions, attitudes, queerness of manner, etc.

If we next consider paranoia, true paranoia in the strict sense, we find a disorder less simply and quickly demonstrable. In terms of logic or "reasoning" ability, the examiner is often hard put to it to point out absurdity or gross error. Indeed, the paranoiac not infrequently surpasses his critics and his judges as the argument progresses. If we study the paranoiac carefully, however, we find that in "judgment" if not in "logic" we have serious disorder.[6]

The paranoiac is usually neat and alert. He lacks the obvious silliness, the mannerisms and strange postures and the "emotional" inconsistency so prominent in the hebephrenic schizophrenic. It is more difficult to demonstrate his psychosis; and much more difficult to say where his deficiency or his disorder lies. If we use a split terminology,[7] we must grant that he "thinks" very clearly, if not, as often happens, brilliantly. His "emotional" reactions are usually consistent with his belief and his actions are not inappropriate. In order to describe paranoia, it is much more useful to speak in terms of evaluation or judgment which do not imply an artificial splitting of personality function into faculties that exist only by definition. If we attempt to deal with the paranoiac in the artificial medium of split terms, taking them seriously, we are inadequate, in a sense, delusional ourselves. And the paranoiac, who is very clever himself at merely verbal levels of abstraction, may best us with his own ingenious manipulations of false knowledge.[7]

Though the paranoiac's disguise of "sanity" is good, he can usually be worked back to his fundamental false premises which finally emerge as delusions demonstrable to physicians and to the courts of law. There is, however, another type of psychobiologic disorder, one usually classified among the so-called psychopathic personalities, which demonstrates far more convincingly the difficulties that arise in appraising human behavior in the customary terms.*

*This discussion is not intended to apply to all types of disorder customarily grouped under the classification of psychopathic personality It applies only to the type to be described here.

At present the so-called psychopathic personality is not regarded as psychotic by the standards of psychiatry. A person diagnosed "with psychopathic personality" is classed as "sane" and "competent" in the law courts. He is usually a person above the average in "intelligence." Not only is he free from the gross irrationality of the schizophrenic; he also lacks the fundamental delusions that we finally succeed in demonstrating behind the beautiful barriers of verbal logic rationalized by the paranoiac. The so-called psychopath, since he is free of psychosis as determined by verbal criteria, medically as well as legally, is not usually considered eligible for admission to the state hospitals or to federal psychiatric hospitals.[8]

One may justifiably be prompted to inquire why this person who is called "sane" and "competent" by law and by most psychiatrists should need to be sent to the hospital.

The answer becomes obvious if we consider his case not in the cross-section of our interview but in the longitudinal section of his history. Despite his charming manner, his freedom from any sign of "nervousness" or maladjustment, his apparent trustworthiness and capability, we find that his behavior is a record of purposeless folly seldom attainable by other mortals.

During the past several years, we learn, he has obtained two dozen or more excellent positions. He has shown himself highly capable, in the verbal sense, but has always as if by deliberate folly failed spectacularly or voluntarily left his source of livelihood for no reason intelligible to the ordinary man. Sometimes, while earning twice as much money as he needs, he commits petty thefts. Again, just after a raise in salary, he will boast widely of the seduction of his employer's wife—sometimes falsely, sometimes in truth. Just before being promoted to a better position in business, he will sell large quantities of his company's commodity well below cost in a puerile impulse to swell his sales record. He is not confused in the ordinary sense and "knows" that his folly will be detected at once. On another occasion, while acting as host to customers for his company he will, despite the presence of many feminine entertainers and the immediate availability of more than even a Solomon would require, cross a nearby state line and bring in other women, violating the Mann Act and plunging himself into

disaster. When one finds that he had no particular interest in the imported charmers, never in fact having seen them before, and that he made no attempt to sample their wares, one is at a loss to account for his action. Relatives have obtained highly paid political sinecures for him, positions requiring his presence merely for an hour each day. Even this proves to be too much for him. He settles down to glum, solitary drinking and does not come to work at all.

He has been arrested dozens of times for petty thefts, forgeries and disorderly conduct. Faithful friends and relatives rush to his aid and release him. When serious charges are brought against him, his attorneys very often succeed in having him sent to a psychiatric hospital. After study in the hospital, no evidence of a recognized psychosis is found and he is released to renew his trouble-making in the community and his active personal failures.

He has been married for years but has never shown any effort to support his wife or children. He protests eloquently his high romantic passion for his wife and describes his devotion convincingly as immortal and all but Quixotic. He is especially articulate along these lines when his wife, worn out after years of neglect and abuse culminating in his casually bringing public bawds into the house, has decided to divorce him. He writes verbally passionate letters to her, protesting not only his rare and magnificent love but also pointing out the terrible injustice of her proposed act, implying that, though he is too devoted and too heartbroken to feel bitterness, God will never forgive her for this cruelty toward him; that in the next world she will still be dogged by the anguish of remorse. His wife nearly always is won over. If she is slow in agreeing to take him back, he telephones her repeatedly, begging her to buy poisons for him to use in killing himself. Besides his wife, he usually wins many other feminine protectors and benefactors who nurse him through feeble, maudlin sprees, who obtain new positions for him and who call physicians and friends to his aid when he grandiloquently threatens suicide by telephone from a brothel or feigns paralysis after lying out half-drunk and alone in some uninviting cornfield. Though he often has casual sexual relations with women he never, apparently, becomes attached to any (except in the sense of indiscriminate dependency) and his erotic drive

seems not only uncomplicated but extremely feeble. His surprising ability to keep women, highly virtuous and otherwise, interested in him and always ready to succor him apparently lies in his helplessness. The impulse to mother a baby, protect it and help it grow up, is a persistent one in women; and they seldom see that this is a baby who will never grow up.

When questioned about his ever-accumulating follies and failures, he always explains them away glibly or freely admits them as faults which he now understands so well and is so thoroughly determined to avoid that it is difficult not to believe him bound for high and sure success. After he has repeated his failures, he gives the same impression of confidence and sincerity as before. On giving his "word of honor" to his physician or his relatives, he looks one straight in the eye, and, though he knows well that he has given and immediately broken this pledge dozens of times, he expects to be taken with solemn seriousness. He does not seem to be pretending in the ordinary sense (that is, as a person who realizes he is pretending) but rather to be unaware of the difference between pretension and genuineness of purpose.

He is completely untrustworthy, and he breaks his word as readily when it will obviously bring him to personally painful consequences as he will cheat an acquaintance or a benefactor. If he cannot, by rationalizing, escape admitting his lies, he will admit them with a superficial appearance of shame and suffering that is deeply convincing but which, probably, is pure mimicry, and which delays him not a moment in repeating his betrayals. While a patient in psychiatric hospitals he regularly violates his parole, though he "knows" this will cause him to be locked up on closely supervised wards with hallucinating and regressed psychotic patients. No punishment, however drastic or inevitable, prevents him from repeating his follies and violating every trust that is reposed in him.

Many persons with so-called psychopathic personality use alcohol not only to excess but peculiarly. Those who drink nearly always admit that it gives them no pleasure. They do not often become lively or convivial but sullen and solitary. Unlike the ordinary neurotic drinker, they cannot be shown to be seeking relief from some definite worry or solace from ordinary failures or

griefs. They drink to drunkenness on the eve of a reconciliation with a wife whom they have won back by vigorous and persistent vows of sobriety; or on leaving a hospital where they have been confined with patients they regard as "raving madmen," knowing that drinking will cause them to be returned at once. Typically, the so-called psychopath's drinking is done in uninviting fields or remote thickets. In the South, he is often driven to such places by a colored boy, hired for the purpose, who stands by sometimes for several days while the cheerless drinker stumbles, cursing feebly, in the bushes or lies whimpering and half-sodden in the mud and weeds. When the liquor has been exhausted, his faithful driver brings him home.

Careful observation of such personalities over a prolonged period leads this writer to the conviction that they have little or no "emotional" reaction in the ordinary sense to the general business of living. Nothing means enough to them to induce consistent striving or demand reliability or veracity. Though they react verbally as if they understand and appreciate ordinary human values, these values are inaccessible to them. Since they have never experienced "love," "pride," "grief," "shame," etc., they cannot conceive of what these mean as experiences to the ordinary person. Being, none the less, very astute in a superficial sense, they can use all the words that are used by those who do participate in living at full psychobiologic levels. The psychotherapist cannot teach them about this aspect of living, or this dimension of experience, in any way except the way a color-blind person can be taught what "red" is to those who are not color-blind. He who is color-blind may learn to give the wave-length of red in Angström units, to speak of the redness of blood and of the sky at sunset, to discourse at length about the hue, saturation and brilliance of various "reds," but he cannot be taught to experience red directly.[7, 8]

If we assume that in the type of personality now discussed there is a failure to experience the more specifically human values or meanings, we can better understand his conduct. He is without the ordinary guiding stimuli which enable the healthy person to pursue his aims successfully and to obtain satisfaction and joy from his living. Failing at the full level of psychobiologic functioning,[9] he tends to regress, to sink back to less complicated modes

of activity, to a less specific and less highly-differentiated biologic status. In a broad sense, this principle of regression runs through all functioning and all forms. The fish that is caught soon ceases to function as a fish, though cells in his body persist for some time in simpler biologic activity. Later, biologic activity ceases; the cells are no longer cells but less complex organic molecules. Eventually even these are broken down to the relatively simple and relatively functionless inorganic level.

If we regard the so-called psychopathic personality as suffering a *semantic dementia* or a *semantic dysergasia,* his clinical picture becomes more comprehensible. He shows no disorder at gross neurologic levels, no disorder at rational levels; but at the semantic level, the level of evaluating and of experiencing life as a totally integrated organism, he shows gross disorder. This disorder is often great enough, the writer believes, to be classed as psychosis. A person's failure to function at this level provokes regression, and this regression is expressed in a not clearly "conscious" drive toward failure and folly. He destroys himself actively at personality or cultural levels, though of course without "understanding" in a semantic sense that he is doing so. This self-destruction we might, perhaps somewhat too dramatically, call a semi-suicide.[8]

This writer does not mean to imply that no changes of any sort in the central nervous system accompany the disorder described as expressing itself purely at a semantic level. Nor is it implied that no such changes occur in schizophrenia when we express doubts that schizophrenia arises primarily because of a local damage within the brain such as occurs in brain tumor or in encephalitis. It seems obvious that if one learns French, gets married or takes a trip to China, "organic" changes in the sense of new engrams, differences in circuiting along the many neuronal pathways are inevitable. These changes naturally affect the future reactions of the organism, the future experiencing of life. It does not seem grossly implausible to grant that vast and highly significant changes of function-pattern occur, probably in terms of biochemistry or at electro-colloidal levels, in the nervous system as a result of repeated and cumulative faulty reactions. If we say that "psychogenic" factors probably play an important part in the develop-

ment of semantic dementia (or of schizophrenia), we mean that the changes in the nervous system are, in large part, and perhaps primarily, those brought about by responses to the environment rather than those caused by a microorganism, a virus, a neoplasm or a "degeneration" originating intrinsically.

What experiences and what reactions to experience may play a part in the development of such a personality disorder as semantic dementia constitute a subject beyond the limits of this paper. It is the purpose here to describe briefly a type of disorder which is manifested only at levels of experiencing where the usual split-terms fail to be useful as communication. The terminology of General Semantics and the extensional, multiordinal orientation of General Semantics as formulated by Korzybski[7] immediately show their great usefulness in psychiatry when we consider this disorder. The disorder of the person with semantic dementia cannot readily be stated in ordinary definitions but can be understood only in terms of experiencing or living. When we approach semantic dementia merely with verbal definitions, we are confronted by a picture of perfect functioning at rational, verbal levels, by a convincing mimicry of life—an impenetrable "mask of sanity."[8] In distinguishing between the mask and what is real "sanity," or healthy human functioning, we must work in terms of total experiencing, rather than in definitions and abstractions that fail to convey first hand meaning.

Department of Neuropsychiatry
University of Georgia, School of Medicine
Augusta, Ga.

REFERENCES

1. Biggart, J. Henry: Pathology of the Nervous System. William Wood and Co., Baltimore. 1936.
2. Noyes, Arthur P.: Modern Clinical Psychiatry. W. B. Saunders Co. Philadelphia. 1935.
3. Hollos, S, and Ferenez, S: Psychoanalysis and the Psychic Disorder of General Paresis. Nervous and Mental Disease Publishing Co. New York.
4. Conn, Jacob H.: An examination of the clinico-pathological evidence offered for the concept of dementia præcox as a specific disease entity. Am. J. Psychiat., 22:1039-1082, March, 1934.

5. Elvidge, Arthur R., and Reed, George E.: Biopsy studies of cerebral pathologic changes in schizophrenia and manic-depressive psychosis. Arch. Neurol. and Psychiat., 40:303-306, August, 1938.

6 Strecker, E. A., and Ebaugh, F. G.: Practical Clinical Psychiatry. P. Blakiston's Son and Co. Philadelphia. 1935.

7. Korzybski, Alfred: General semantics, psychiatry, psychotherapy, and prevention. Presented at the annual meeting of the American Psychiatric Association, Cincinnati, May 20-24, 1940.

8. Cleckley, Hervey: The Mask of Sanity. The C. V. Mosby Co. St Louis. 1941.

9. Meyer, Adolf: Leading concepts of psychobiology (ergasiology) and of psychiatry (ergasiatry). Proceedings of the fourth conference on psychiatric education, National Committee for Mental Hygiene, 1939.

A CASE OF ACUTE SUPRARENAL HEMORRHAGE

The Waterhouse-Friderichsen Syndrome

BY WILLIAM A. GOLLICK, M. D.

Hemorrhage into the suprarenal glands is characterized by sudden onset of circulatory failure in association with a general purpuric eruption, resulting in sudden death. The diagnosis is rarely made until after autopsy. All ages suffer, but infants and young children are most frequently affected. The condition has been described in the literature as the Waterhouse-Friderichsen syndrome. To date a total of 96 cases[1] have been reported to which this case is added.

Graham Little,[2] in 1901, recognized and classified such cases as a distinct clinical entity. The reports of Waterhouse,[3] in 1911, and Friderichsen,[4] in 1918, gave the name of Waterhouse-Friderichsen syndrome to fulminating septicemia with purpura and suprarenal hemorrhage. Since then, other excellent contributions have been made, especially that of Aegerter,[5] in 1936; Sacks,[6] in 1937; Lindsay et al., and Leone,[7] in 1941.

The cause of the hemorrhage into the suprarenals is not definitely known. In considering the etiology one must differentiate between suprarenal hemorrhage in the new-born and those occurring in older children and adults. In new-born and still-born infants, suprarenal hemorrhage is chiefly of a mechanical and traumatic origin. There is also some relationship between eclampsia in the mother and hemorrhage into the suprarenals in the new-born. In hereditary syphilis of the new-born, the suprarenals have been found to contain more or less extensive hemorrhagic areas. In older children and in adults, suprarenal hemorrhage has been found in cases of acute infectious diseases, especially in diphtheria, scarlet fever, measles, pneumonia and meningococcal mengitis. In some cases alcohol, syphilis and hemophilia were noted as contributing factors. Of the organisms found, meningococci and bacilli influenzae, were most frequently present although the streptococcus haemolyticus, the staphylococcus aureus and the pneumococcus have been found. Various theories have been advanced for the

cause of the hemorrhage. It is believed by most investigators that a combination of venous thrombosis and an increased permeability, due to toxins from virulent organisms lodged in the vessels, explain the majority of cases. Recently, Daft and Sebrell[8] showed, in experiments on rats, that avitaminosis is an important factor in the production of hemorrhagic necrosis and atrophy of the adrenal glands. In still later experiments, these investigators[9] found that adrenal hemorrhage or necrosis occurred in almost 100 per cent of the rats on a diet deficient in vitamin B complex, when the rats received a supplement containing crystalline pyridoxine, (B_6), but no "filtrate factor." As fractionation of the active "filtrate-factor"concentrates progressed, it became evident also that the factor preventing adrenal necrosis followed administration of pantothenic acid. When synthetic pantothenic acid was given to the rats, there was arrest and repair of the degenerative process in the adrenal glands. These interesting findings have been confirmed by the experiments of Salmon and Engel.[10]

Aegerter and Sacks have called attention to the striking similarity of the cases showing the Waterhouse-Friderichsen syndrome. The patient is usually a child who has become suddenly ill. Vomiting, chills and fever occur, followed by a collapse in a few hours. Cyanosis is common and fever is markedly virulent, usually above 103°F., with accelerated respiratory rate. Within 12 hours after onset, a petechial rash is observed on the skin. The leucocyte count is usually high. In cases caused by septicemic meningococcus, typical physical signs of meningitis are usually not seen; but resistance to passive movement of the extremities, headaches or weakness are common. In Aegerter's review, convulsions were noted in 12 of the 57 cases. Death usually occurred within 24 hours after onset. The course of the illness is so rapid toward its fatal end that complete studies are not done while the disease is in progress; and it is only after the autopsy findings that one diagnoses the condition.

Owing to the rapid progress and the difficulty in diagnosis, treatment is seldom attempted or effective. According to some investigators,[1] this should consist of: (1) measures to combat the invading organism; (2) measures to combat the suprarenal damage; and (3) supportive treatment. As the meningococcus and bacillus influenzae account for the greater proportion of the cases; and, as the

organism is not identified immediately, it is logical to assume the presence of either of these two and administer anti-meningococcus or anti-influenza serum. Sulfapyridine has also been recommended. Aegerter recommends treatment with measured doses of cortical extract, sodium chloride and epinephrine. The mortality rate has been 100 per cent, although, recently, Carey[11] has reported a case of recovery in a 27-year-old female.

Case Report

Family and Personal History. A. F. was a white male, age 32, single, an operator in a radio factory, of Hebrew extraction. His family history was negative for nervous and mental diseases. He was born in New York City on August 29, 1909, and birth and early development were said to have been normal.

A. F. was said to have had a speech defect and could not be understood until he reached the age of seven years. He walked at the usual age. He had a great deal of intestinal trouble as a child. At school, the boy was considered average. He did not have many friends, spent much of his time reading, and liked music. There was no history of any abnormal sex activities. After leaving school, A. F. worked for a while in a laundry. He then found a job as a wirer in a radio factory.

Psychosis: It was first noted that there was "something wrong" with A. F. about one and a half years before his admission to Kings Park State Hospital in 1933. He was irritable, fault-finding and restless. He complained about the amount of spending money he was allowed to have, complained that people on the street watched and looked at him, complained about the people who came to the house, and wanted to be left alone. He seemed to realize that he was not well and went to consult a physician of his own accord. He was sent to the Vanderbilt Clinic, New York City, and from there was sent to Kings County Hospital for observation. He was admitted to the Kings Park State Hospital on a regular commitment on August 26, 1933. On admission he was quiet and cooperative, but showed shallowness and superficiality of manner. He said he felt "downhearted" because, for some time, he had been having constant erections and nocturnal emissions. He thought other persons might be having the same experiences and said that this caused him

to look sharply at others when he went out. Hallucinations were denied. Ideas of reference were the only psychotic manifestations he would admit.

A. F.'s orientation and remote and recent memory were good; retention and recall were good; counting and calculation were fair; the thinking capacity was good; school and general knowledge were fair; insight and judgment were impaired. Physically, the patient was well developed and well nourished. He had a peculiar quality to his voice resembling the cleft-palate type, although there was no such anomaly present. Blood pressure was 100/75. He made a good adjustment to the hospital routine, received a parole of the grounds and was paroled on December 3, 1933. During his parole period, he made a good adjustment; and he was discharged a year later.

Following release from the hospital A. F. obtained work in a laundry with his father, where he remained for five months. He was more or less normal, was congenial and sociable, but his sociability did not go so far as friendships or mixing with the opposite sex. He caused frequent quarrels with his employer and finally lost his job as a result. Following this, he gradually began to "slump," and he adjusted very poorly at home. He again developed ideas of reference, had frequent quarrels with his neighbors, became very noisy, used abusive and vulgar language, and was subject to periods of emotional instability in which he became assaultive and destructive. His productions were ramb'ing and circumstantial, and he had a tendency to misinterpret events in his surroundings. He had systematized delusions of a persecutory nature.

A. F. was again admitted to Kings Park on a regular commitment on February 6, 1935. At this time, in attitude and general behavior, the patient evidenced very marked, silly conduct. In his stream of mental activity, he showed no disorder in spontaneous conversation; he answered questions fairly promptly and relevantly; and he showed a logical progression in association of ideas. In emotional reaction, affect and mood, he was very silly and childish, emotionally deteriorated and rather indifferent to his surroundings. He did not show any insight into his condition. At this time, the physical examination was essentially negative. While in the hospital, A. F. made a fairly satisfactory adjustment, but he

had periods when he was disturbed, noisy and threatening. His condition so improved, however, that he was again paroled on December 9, 1935. The patient, however, made a poor adjustment on parole, was simple, shallow, inadequate and lacking in judgment and insight. For a while, he took a course in creative writing, then went to a CCC camp in Nevada, then became very much interested in becoming a dancer. He failed to make a satisfactory adjustment at the camp and had to be returned in two months. At home, he was irritable, excitable, overtalkative and difficult to handle, so that he had to be returned to the hospital approximately six months following his parole. For a while, he made a fair adjustment; but, at times, he was noted to be disturbed, assaultive, actively hallucinated and not able to get along with other patients.

In April, 1938, the patient, for the first time, had a convulsive seizure which was of a typical grand mal type. From then on, these occurred on the average of about once a month. A. F. also had tantrums, and he became so disturbed that he had to be placed on the disturbed ward. On March 31, 1940, the patient showed a papillary eruption over his abdomen and extremities. Examination at this time revealed a somewhat ataxic gait, a positive Romberg sign, and absent cremasteric reflexes. His pupils were equal and reacted to light and accommodation, and there was no nystagmus. Cranial nerves were normal except for a slight squint which the patient had had since birth. The cervical lymph nodes were noted to be enlarged. The thyroid was not enlarged. The patient's weight at this time was 135½ pounds. A diagnosis of polyneuritis, on the basis of avitaminosis, was made. He was placed on Vitamin B_1 (thiamin chloride).

On April 24, 1940, while in one of his convulsive seizures, A. F. fell and suffered a fracture of the neck of the left femur. Following necessary surgical treatment, the patient was placed on the chronic infirmary ward (November 26, 1940) where he remained until the time of his death. He showed considerable mental and physical deterioration, and weakness, with some atrophy of the muscles of the lower extremities. He spent his time in bed or in a wheel chair and continued to have convulsive seizures on an average of one a month. Luminal (gr. 1½) had been prescribed, and

the patient was also receiving Vitamin B_1 (thiamin chloride) tablets (mllg. 1) t.i.d., eggnog, b.i.d., and tincture of iron and quinine. Except for a steady increase in weight, there was no improvement in his physical condition. On the day previous to death, he was apparently his usual self; there is no history of his having complained to anyone; and there was nothing unusual noted. On the morning (6 a. m.) of September 9, 1941, the patient was found dead in bed. There was no evidence of any injury or any evidence of suicidal attempt. A coroner's autopsy revealed the cause of death as acute hemorrhage of the adrenal glands, hemorrhagic purpura of unknown origin. His mental diagnosis had been dementia præcox, hebephrenic type.

Autopsy. The autopsy was on September 9, 1941 (9:30 a. m.), by Dr. G. A. Silliman and Dr. G. Volow. The body was that of a moderately well-developed, fairly well-nourished white male, aged 32, height five feet six inches, weight 140 pounds. Examination of the external surface showed a diffuse petechial rash over the anterior and lateral surfaces of the chest from about the level of the fourth rib almost to the costal margin. There were a few spots on the arm resembling purpura. The neck was in a position of hyperextension. The knees were flexed; the left knee joint was somewhat prominent, with muscular atrophy above and below the joint. The right lower extremity showed somewhat similar findings but not so marked as in the left lower leg. The left leg showed an ulcer which was partially broken down. The hair was short and black, the eyes brown. The pupils were widely dilated, and there were slight areas of pigmentation on the sclerae at the outer canthus of each eye. There were no indications of recent injury. Many teeth were missing, and the gums showed some evidence of gingivitis. Postmortem lividity was present. Rigor mortis was partial.

Examination of the head showed the scalp was not remarkable. The skull showed a distinct groove, running transversely just anterior to the vertex; but this groove was found to correspond on the under-surface of the skull cap to the coronal suture. The skull was somewhat increased in thickness. There were no unusual markings. The dura did not appear thickened. The pia and arachnoid were normal in gross appearance. Cerebrospinal fluid was moder-

ately increased in amount. Intracranial blood vessels were not thickened.

The brain was examined at the New York State Psychiatric Institute and Hospital.

In examination of the thorax, the costal cartilages cut easily. The upper respiratory passages contained some mucoid material. The thyroid was of moderate size and, on cut section, presented a colloid appearance. There were a few light adhesive bands fixing the apex of the pleura to the cupola of the chest cavity. There was no inflammatory exudate. The right lung weighed 340 grams; the left, 295. Both were fully crepitant but, on section, they showed moderate passive congestion and slight edema. There was no evidence of pneumonia or tuberculosis and no evidence of thrombi in the pulmonary veins. The mediastinal lymph nodes were not enlarged. The pericardium showed no gross thickening, either in the visceral or parietal layers. There was some increase in the pericardial fluid, which was clear and light straw-colored. There were a few small petechiae present over the auricle and the auricular appendix.

The heart weighed 310 grams. The musculature was somewhat thin and the myocardium of pale brown color. The coronary vessels showed no tortuosity or rigidity, and there was very little atheromatous change about the orifices. No endocardial thickenings or vegetations were evident. The auricles and ventricles contained some chicken-fat clot. The aorta showed a very fine striated infiltration of atheromatous nature, but there were no plaques or calcification. The esophagus was grossly normal.

The abdomen, on external examination, was not remarkable. The peritoneum was smooth, glistening and transparent; and the gut appeared somewhat pale and bloodless. The stomach, and small and large intestines and appendix appeared grossly normal except for considerable gastric dilatation. The stomach contained a moderate amount of turbid fluid contents. The liver weighed 1,755 grams. It was moderately congested, but there was no roughening of the surface and no increase in fibrous tissue in the parenchyma. The gall bladder was grossly normal. It was distended with bile, but no stones were present. The spleen weighed 155 grams; it was of moderate size, was congested, but otherwise showed no gross pathology. The pancreas weighed 100 grams, and was grossly normal.

The right kidney weighed 140 grams; the left, 155. Both were of moderate size, and the capsules stripped readily, leaving a smooth, glistening surface. Sectioning showed cortex and medula of normal proportions and relationship. There was a moderate amount of congestion present. There was very little pelvic fat. The ureters and urinary bladder were grossly normal.

The adrenals at first could not be accurately located; but, through the reflected peritoneum, they appeared of a deep, dull red color and overlay practically the entire upper half of each kidney. They were dissected free with some difficulty, were unusually large, thick and broadened; and, on section, there was a large red area of relatively recent hemorrhage which had partially organized. This was present in both glands, which had undergone similar changes.

The abdominal lymph nodes were not enlarged; and the sexual organs were normal in gross appearance.

In summary, there was muscular atrophy of the lower extremities; chronic atrophic arthritis of the left knee; a petechial rash over both chest walls; marked congestion of the brain which will be discussed further; moderate pulmonary congestion and edema; pericardial petechiae; moderate passive congestion of the liver, spleen and kidneys; gross and extensive hemorrhages into both adrenal glands; with the matter of avitaminosis an open question.

Microscopical examinations of the adrenals were by Dr. G. Priestman. He found the medulla destroyed by massive hemorrhage. Extensive hemorrhage with cellular destruction was noted also in the cortex. Cell outlines were very indistinct, no cell walls being visible in many areas. Considering the age of the patient, fatty changes in the cortex were a little more marked than usual. Thrombi were noted in some of the veins in the capsule.

Examination of the brain at the Psychiatric Institute was done by Dr. Armando Ferraro. He reported: "In the meninges, there are no appreciable pathologic changes. The blood vessels there do not disclose thickening of their walls nor appreciable degenerative changes. In the cortex, no signs of inflammatory changes are detected in any of the investigated areas.

"In the frontal and parietal lobes, one meets, however, with degenerative changes of the nerve cells which are not diffuse and which do not involve all the various cortical layers. Such degener-

ative changes are patchy in distribution and generally involve the tip of the convolutions. In such areas, there is a definite rarefaction of nerve cells involving most of the layers, but more pronounced in the three outer layers. The nerve cells in these areas are smaller, some of them appearing shrunken, that is with deeply-stained cytoplasm and nucleus, while others appear just retracted without hyperchromasia.

"Here and there, away from the tip of the convolution, one finds also areas where the outer layers of the cortex disclose numerous smaller elements as well as rarefaction of nerve cells. In the above mentioned areas, neuronophagia is detectable. Remnants of nerve cells and shadow cells are also encountered.

"Temporal and occipital lobes disclose much better preserved areas and one does not meet often areas where the nerve cells are degenerating in large number.

"In the Ammon's horn, there is a continuity of the lamina pyramidalis and no appreciable degenerative changes of its nerve cells. No appreciable degenerative changes are seen in the caudate, putamen or globus pallidus. Scattered degenerative cells are found, however, in the various nuclei of the thalamus. No appreciable degenerative changes are encountered in the mamillary body in the anterior and posterior quadrigeminal body and in the vestibular nuclei.

"In the cerebellum, a large number of Purkinje cells disclose degenerative changes. In the mesencephalon, no appreciable degenerative changes are encountered.

"Contrasting with the nerve cell degeneration, even in the outer layers, where it is quite pronounced, one does not see a corresponding glia reaction. As a matter of fact, the glia nuclei seem also to reduce in number and the Holzer method does not disclose any appreciable fibroglia reaction in the various areas of the cortex or in the subcortical formations.

"Myelin sheath preparations disclose only rarefaction of myelin but no primary process of demyelination. Only here and there, very occasionally one finds very small areas in the center of which the myelin is seen breaking down in small fragments.

"The fat stain reveals in the frontal lobes presence of increased lipoid content of the nerve cells as well as increased content of

lipoid substance in the perivascular spaces and in the endothelial lining cells of the blood vessels. This excess of lipoid substance is not disclosed in the rest of the brain.

"All over the various sections studied with Nissl, one can detect the presence of small capillaries whose walls are thicker than normal and small blood vessels in which a slight endarteritic process is present. Neuropathological diagnosis: Neurocellular degenerative changes in the frontal parietal areas (mostly localized)."

In commenting on the findings Dr. Ferraro states: "It is of interest to note that autopsy in this case was done three hours after death; postmortem complications have therefore been avoided. It is also of interest to note that the patient's age was approximately 30 years, thus eliminating any possible complication related to advanced age.

"I have failed to find in my studies any data justifying the suspicion that avitaminosis might be at the basis of the pathological process inasmuch as neither swollen cells with eccentric nuclei were found, nor did I find predilection of the pathological changes in the areas affected by Vitamin B_1 deficiency (mamillary body, hypothalamic region, quadrigeminal bodies anterior and posterior, and vestibular nuclei).

"The neuropathologic changes, therefore, are quite unspecific and seem to involve mainly the cortex of the anterior portion of the brain. There is no question that neurocellular changes of a degenerative nature are diffusely scattered in such a portion of the brain, and it is of interest that they involve particularly the outer layers or 'associative' layers. Though one could speak of a nonspecific encephalopathy, I think that a more conservative opinion would be one of stating that diffuse degenerative neurocellular changes are present, scattered in the anterior portion of the brain.

"What the relationship of these changes is to the bilateral hemorrhages in the adrenal gland is hard to establish because of the fact that hemorrhages might have been an acute occurrence and not necessarily correlated to any previous pathologic changes of these structures."

Comment

In the case here reported, death was sudden. Owing to the fact that the condition was not diagnosed until after death, investiga-

tions, such as blood culture, which might have thrown light on the etiological factor, were not made. It is also difficult to state what relation, if any, the avitaminosis had to the development of the suprarenal hemorrhage. The patient had a polyneuritis, which was explained on a basis of avitaminosis, and he had been receiving vitamin therapy for about a year and a half previous to death with no improvement. Microscopic examination of the brain does not indicate that avitaminosis was the cause of the pathological changes found therein.

Conclusion

A case of acute bilateral suprarenal hemorrhage is reported. The etiology of the condition is discussed, and the question of avitaminosis as a cause is also considered.

Kings Park State Hospital
Kings Park, N. Y.

REFERENCES

1. Lindsay, J. W., Rice, E. C., Selinger, M. A., Robins, L.: The Waterhouse-Friderichsen syndrome; acute bilateral suprarenal hemorrhage. Am. J. M. Sc., 201: 263-270, February, 1941.
2. Little, E. G.: Cases of purpura, ending fatally associated with hemorrhage into the suprarenal capsules. Brit. J. Dermat., 13:445-467, December, 1901.
3. Waterhouse, R.: A case of suprarenal apoplexy. Lancet, 1:576, March 4, 1911.
4. Friderichsen, C.: Nebennierenapoplexie bei kleinen Kindern. Jahrb. f. Kinderh., 87:109, 1918.
5. Aegerter, E. E.: The Waterhouse-Friderichsen syndrome. A. N. A., 106:20, 1715-1719, May, 1916.
6. Sacks, M. S.: Fulminating septicemia associated with purpura and bilateral adrenal hemorrhage. (Waterhouse-Friderichsen syndrome.) Am. Int. Med., 10:1105-1114, February, 1937.
7. Leone, G. E.: Spontaneous hemorrhage. (Suprarenal apoplexy.) Am. Int. Med., 14:2137-2142, May, 1941.
8. Daft, E. S., and Sebrell, W. H.: Hemorrhagic cortical necrosis in rats on deficient diets. Pub. Health Rep., 54:2250-2256, December 22, 1939.
9. Daft, E. S., Sebrell, W. H., Babcock, H., Jr., and Jukes, T. H.: Effect of synthetic pantothenic acid on adrenal hemorrhage, atrophy and necrosis in rats. Pub. Health. Rep., 55:1333-1337, July 26, 1940.
10. Salmon, W. D., and Engel, R. W.: Pantothenic acid and hemorrhagic necrosis in rats. Proc. Soc. Exper Biol. and Med., 45:621-623, November, 1940.
11. Carey, T. N.: Adrenal hemorrhage with purpura and septicemia (Waterhouse-Friderichsen Syndrome) with recovery. Am. Int. Med., 13:1740-1744, March, 1940.

THE AMPHETAMINE-BARBITURATE THERAPY IN PSYCHIATRIC CONDITIONS

BY EUGENE DAVIDOFF, M. D., AND GERALD L. GOODSTONE, M. D.

This paper concerns itself primarily with the use of amphetamine sulfate in conjunction with sodium amytal and other barbiturates in the treatment of neurological and psychiatric conditions. However, a résumé of the clinical applications of the use of amphetamine sulfate will be presented first.

In previous communications, the writers have stated that amphetamine sulfate is of greater value in acute toxic or infectious states than in functional psychoses and psychoneuroses. It is more efficacious in acute toxic states than in more prolonged organic conditions. In organic psychoses, where deterioration is in progress and defects of the sensorium or personality alterations have developed, the response is uniformly unsatisfactory. Amphetamine sulfate appears to be of greater value in organic states when no psychosis is demonstrable. In the psychoses, amphetamine sulfate is more useful in cases of recent onset following intoxication, particularly where alcohol is the etiological factor, than in functional psychoses. It has a beneficial action in postinfectious and posttraumatic psychoses. Paranoid conditions, of whatever origin, are not infrequently aggravated by the drug. In organic conditions without psychosis, the drug is of most value in narcolepsy and of considerable worth in acute alcoholism. The writers also find that it possesses some advantage in postencephalitic Parkinsonism when administered as an adjuvant to stramonium, belladonna, scopolamine, atropine or the "Bulgarian Treatment" (with Rabellon). Amphetamine sulfate may possess some merit in barbiturate and morphine intoxication, and in postinfectious and cranial traumatic conditions. The writers have used it in the behavior disorders of children, particularly where organic factors have been present.

For the past four and one-half years, the writers have employed the combined sodium amytal, amphetamine sulfate treatment in psychotic and psychoneurotic patients. In this communication, is a report on the results of this therapy and certain modifications which were more recently introduced. The synergistic effect of am-

phetamine sulfate and sodium amytal tends to produce stimulation of the autonomic nervous system and of the lower center functions, and it results in a more coordinated action of the integrated functions of the central nervous system as well.

In previous communications, the procedure employed at the Syracuse Psychopathic Hospital was discussed. The drugs were administered alternately. Amphetamine sulfate was injected intravenously and sodium amytal orally. At first, they were given on successive days. More recently, in certain states, sodium amytal was administered in the late afternoon, and the patients were allowed to sleep until the next morning, when amphetamine sulfate was injected.

Certain additional variations in the regime were necessary to adapt it to the individual patient. In excited cases, for example, the sodium amytal was given daily for several successive days prior to the initial amphetamine sulfate injection; and, in depressed cases, amphetamine sulfate was injected daily on successive days before the administration of sodium amytal was begun. Where deep narcosis was not indicated, amphetamine sulfate intravenously or orally and sodium amytal orally were employed simultaneously or in fairly rapid sequence. These variations were utilized in the beginning, during the course or at the end of the periods of treatment.

Further modifications have been more recently introduced. "Delvinal" sodium has been substituted for sodium amytal. With "delvinal" sodium, less tolerance is developed; fewer toxic effects are noted; and prolonged narcosis of satisfactory depth can be obtained with smaller repeated doses. The narcosis is more easily controlled. The dosage of sodium amytal employed varied from .4 to 2 gm. The dosage of "delvinal" sodium varied from .2 to 1.5 gm. In the more severe psychotic states, the drugs were administered in divided doses until narcosis was obtained. In schizophrenia and more severe manic-depressive psychoses, the aim was to obtain deep narcosis with the barbiturate derivatives. In psychoneurotic states and in those patients who exhibited milder psychotic manifestations, a slighter degree of sedation was produced.

Dextro-amphetamine sulfate (administered orally) has also been substituted for amphetamine sulfate. According to Alles, the ana-

leptic effect of the former is one and one-half that of amphetamine sulfate; the physiologic effects are not so marked; therefore, fewer untoward reactions are noted; and dextro-amphetamine sulfate acts more quickly. Amphetamine sulfate, 10 to 40 mg., had been injected intravenously every day. Dextro-amphetamine sulfate in doses of 5 to 30 mg., has been administered daily by mouth.

Results Classified by Diagnosis

Manic-Depressive Psychoses. Fifty cases of this type were treated. Of these, 20 patients were severely depressed and 10 mildly depressed. There were 10 of the manic and 10 of the mixed type.

Of the 20 severely depressed patients, 12 improved during their stay at the Psychopathic Hospital, and were discharged to their homes. All of the mildly depressed patients recovered rapidly, and five suffering with manic-depressive psychosis of the mixed type and three of the manic group recovered.

In the recovered cases, the rate of improvement was apparently accelerated. The average duration of hospital residence was three weeks. In the control group of 50 cases, the average length of residence was five weeks. This indicates a 40 per cent acceleration in the rate of improvement. In addition, while only 20, or 40 per cent, of the treated cases required further institutionalization, 29, or 58 per cent, of the control patients were committed to a larger State hospital. Those treated who did not recover became, in most instances, more tractable, better adapted to the hospital regime, and more amenable to the psychotherapeutic procedures.

However, a few patients of the manic and mixed types became more excitable. It was necessary to continue the treatment with caution and to modify the procedure by omitting the administration of amphetamine sulfate for several days.

As indicated in the analysis just given, the best results were obtained in the manic-depressive, depressed, group, particularly in depressions of the milder type. The least favorable results were obtained in the manic-depressive, manic, patients. As in dementia præcox, the combined therapy of amphetamine sulfate and sodium amytal proved to be superior to the use of either drug alone in the treatment of manic-depressive psychoses.

The combination of "delvinal" sodium and dextro-amphetamine sulfate appeared to be more effective than sodium amytal and amphetamine sulfate. One of the reasons for this was that "delvinal" sodium did not produce the excitement that sodium amytal sometimes does.

Dementia Præcox. One hundred patients with dementia præcox received the combined treatment. Only those were considered as favorably influenced by the therapy who were discharged to their homes as much improved. Of the 100 cases, 71 were of less than two years duration and 29 of more than two years duration. Of the 71 early cases, 33, or 45 per cent, were discharged to their homes as compared to 26 per cent in a control series of 500 cases. The most favorable results were noted in the early catatonic types. In this group, 21 out of 35, or 60 per cent, were considered improved. The simple type seemed to react favorably, regardless of duration of the psychosis, as five of 10 cases so diagnosed were beneficially affected. While very little difference could be said to exist between the control series and the treated cases of paranoid and hebephrenic dementia præcox, those who received the combined therapy became more cooperative and were made more accessible to investigation.

Cases of more than two years duration were not significantly improved. Twenty-four per cent of those treated by the combined therapy were improved, in contrast to 14 per cent of the untreated cases.

"Delvinal" sodium and dextro-amphetamine sulfate seemed as efficient as amphetamine sulfate and sodium amytal in producing beneficial results. Further comparative study in a larger series of cases is indicated.

Involutional States. The writers have treated 15 patients with involutional psychoses. Those patients who received amphetamine sulfate alone rarely exhibited any improvement and frequently became more agitated. However, the combination of sodium amytal with amphetamine sulfate produced slight improvement in six of the 15 patients. They exhibited less agitation or depression and became more cooperative. In a few cases, when the drugs were employed in conjunction with endocrine medication, better results were obtained.

In the involutional states without psychosis, the combined treatment resulted in transitory relief of the autonomic and physiologic symptoms occurring during the menopause. Except in the very severe psychotic cases, the therapy made the patient more cooperative and accessible to investigation.

Psychoneuroses. In this group the combined amphetamine sulfate-sodium amytal therapy exercised a very favorable influence. In addition to improving the patient's general mental attitude, it made him more accessible to psychotherapeutic procedures.

Cases of reactive depression seemed to respond very favorably. Of 20 such cases, all began to manifest improvement very early in the treatment and were rapidly discharged from the hospital. Here, too, the use of both drugs in combination was more effective than either drug employed alone. Hysterical patients, particularly those with amnesia, reacted well to the therapy.

The combined treatment, largely because of the action of the barbiturates, could be advantageously employed in anxiety states. However, the writers feel that amphetamine sulfate should be administered with caution in these states and never alone. Neurasthenic and hypochondriacal states received temporary benefit in most instances; and, in a few cases, a more lasting improvement was noted.

The use of barbiturates in conjunction with amphetamine sulfate made more effective the treatment of clinic patients with psychoneuroses. "Delvinal" sodium was particularly effective in this group; and its combination with dextro-amphetamine sulfate produced very favorable results.

Psychopathic States, with and without Psychoses. Amphetamine sulfate is of value in accelerating the recovery of patients with episodes of depression associated with psychopathic personality. The drug was more effective when used in conjunction with sodium amytal. The results in disorders of this type were more favorable than in manic-depressive psychoses but not so good as those observed in patients with reactive depressions. In psychopaths without psychosis this therapy resulted in making "concealing" individuals more talkative and more cooperative and, at times, more prone to reveal their guilt. In many instances, these patients be-

came more amenable to suggestion and disclosed facts which they had previously concealed or denied.

Organic and Toxic States. Except in barbiturate intoxications, the beneficial effects of amphetamine sulfate in organic and toxic states are considerably augmented by the addition of the barbiturates. This is particularly true in alcoholism and infectious conditions when the patients are excited. In the clinic, the combined therapy was of value in the treatment of alcoholics, and also in the treatment of children with behavior problems. The writers have found that epileptics respond well to "delvinal" sodium or to a combination of "delvinal" sodium and dilantin but that amphetamine is contraindicated in excited epileptic states and should be given with caution in those cases where grand mal seizures occur. However, in petit mal seizures and psychotic states, amphetamine is of some value in overcoming apathy or drowsiness.

Combined Therapy and Subshock Insulin. In 10 cases of schizophrenia and in five of manic-depressive psychoses, the writers subsequently injected subshock doses of insulin, which were facilitated by the preliminary administration of the amphetamine-barbiturate therapy. In addition to the synergistic action obtained, the patients became more amenable to psychotherapeutic procedures and were more cooperative.

The procedure for administration of subshock doses of insulin was described by Polatin and his collaborators. The insulin was administered to fasting subjects in the morning. The initial dose was five units and this was increased by five units daily. The average dose was 25 to 40 units. The subject received glucose whenever signs of insulin shock became apparent. Throughout the procedure, the patients were ambulatory. The treatment was continued for two months wherever possible.

Conclusions

The combination of barbiturate derivatives and amphetamine in the treatment of psychiatric conditions has been discussed. The cases in this series were patients at the Syracuse Psychopathic Hospital, and, therefore, usually milder and earlier types and, on the whole, more socially adaptable than those seen in larger State hospitals where the more chronic patients are found. In summary:

1. Patients with manic-depressive, depressed, psychosis, reactive depression, and depressed psychoneurotics respond well. An accelerated rate of improvement is noted.

2. Sixty per cent of incipient cases of dementia præcox of the catatonic type manifest some improvement. Followup study was conducted in most cases, and five schizophrenics have relapsed, two of these of the catatonic group.

3. Patients are rendered more cooperative and adaptable to the hospital routine.

4. The treatment has some prognostic value, in that the patient's response gives some idea of his plasticity and his inherent capacity to improve.

5. The therapy is of some use in investigating and in understanding the patient and, therefore, can be applied also to cases of psychopathic personality and prison psychosis.

6. It can be used as a preliminary procedure to other therapeutic methods, such as psychotherapy, hydrotherapy, and the administration of subshock doses of insulin.

7. "Delvinal" sodium and dextro-amphetamine sulfate produced results at least as favorable as those produced with sodium amytal and amphetamine sulfate.

8. This treatment, in modified form, may be employed advantageously in the outpatient clinic or in milder cases where narcosis is not required.

9. In the treatment of toxic infectious conditions such as alcoholism and those organic conditions observed in connection with behavior disorders of children, the therapy has proven useful.

Syracuse Psychopathic Hospital
Syracuse, N. Y.

BIBLIOGRAPHY

Alles, G. A.: Comparative actions of optically isomeric phenilisopropylamines. J. Pharmacol. Exper. Therap., 66:1, May, 1939.

Black, N. D.: The value of diphenyl hydantoinate (dilantin) in psychoses with convulsive disorders. PSYCHIAT. QUART., 13:711-720, October, 1939.

Chittick, A. A., and Myerson, A.: The treatment of agitated and depressed mental states with benzedrine sulfate and sodium amytal. PSYCHIAT. QUART., 15:362-369, April, 1941.

Cohen, B., and Myerson, A.: The effective use of phenobarbital and benzedrine sulfate (amphetamine sulfate) in the treatment of epilepsy. Am. J. Psychiat., 95:371-393, September, 1938.

Davidoff, E., and Reifenstein, E. C., Jr.: Psychiatric aspects of amphetamine (benzedrine) sulfate therapy. Dis. Nerv. Sys., 1:58-63, February, 1940.

Davidoff, E., and Reifenstein, E. C., Jr.: Treatment of schizophrenia with sympathomimetic drugs: benzedrine sulfate. PSYCHIAT. QUART., 13:127-144, January, 1939.

Davidoff, E., and Reifenstein, E. C., Jr.: The results of 18 months of benzedrine therapy in psychiatry. Am. J. Psychiat., 95:945-969, January, 1939.

Davidoff, E., Reifenstein, E. C., Jr., and Goodstone, G. L.: Amphetamine sulfate-sodium amytal treatment of schizophrenia. Arch. Neurol. and Psychiat., 45: 439-445, March, 1941.

Davidoff, E.: The sedative action of "delvinal" sodium in disturbed psychiatric patients. PSYCHIAT. QUART., 15:370-379, April, 1941.

Polatin, P., Spotnitz, Hyman, and Wissel, B.: Ambulatory insulin treatment of mental disorders, N. Y. S. J. of Med., 40:843-848, June, 1940.

Prinzmetal, M., and Alles, G. A.: The central nervous system stimulant effects of dextro-amphetamine sulfate. Proc. Soc. Exper. Biol. and Med., 42:206-207, October, 1939.

THERAPEUTIC VALUE OF PROTRACTED INSULIN SHOCK

BY OTTO BILLIG, M. D., AND D. J. SULLIVAN, M. D.

Since the beginning of the use of insulin shock treatment, protracted shock has been one of the most difficult problems of the entire therapy. All authors on the subject have recognized the danger of such delayed reaction. Moreover, the opinion of its therapeutic value has been divided; some of the comparatively early investigators in this country did not observe any benefit from this type of reaction, while others recognized its value.[1, 2, 3] At that time, the death rate was too high to justify its intentional use; for instance one author[4] reported 16 per cent of fatalities. At the clinic in Vienna, where insulin shock treatment was originally introduced, the coma was prolonged deliberately in a small number of cases by administering luminal during the hypoglycemia. Here also, the frequent lethal incidents among the first cases prevented further experiments in that direction. Only W. Kraulis[3] reported an apparently safe method. He kept his patients in coma up to 12 hours by giving small amounts of sugar (12 to 15 gm. by nasal tube) beginning during the fourth hour of hypoglycemia. To the present writers' regret, he did not describe the shock symptoms, so it is not known how deep the comas were. He did not report any fatal outcome, while four out of his six patients—who had previously been unsuccessfully treated with the "classical insulin shock treatment" [1, 5] and with metrazol—improved considerably with his modified treatment.

The writers observed also in their material[6] a definite improvement closely associated with the protracted shocks. Most of these cases had been resistant to previous treatment. Among the present material, 12 patients received a group total of 25 prolonged shocks.* These reactions were attained by continuing the coma until the medullary phase[7, 8] was reached and by keeping the patients in that stage for 15 to 30 minutes, except for two instances when it was extended to an hour. During the course of treatment two patients had four, two patients had three, three patients had two, and five patients had one protracted shock each. The pro-

*Since completing this paper, the writers have observed six more protracted shocks in three patients. In these additional cases, the observations were very similar to those described in this report, thus increasing the group total to 31 protracted shocks.

longed deep comatose phase lasted from three and one-half to 15 hours, during which the patients remained completely unresponsive. The stupor following lasted from seven to 72 hours.

The protracted shock doses of insulin varied from 95 to 400 units. The average shock dose of the writers' present patients is 215.8 units. This is comparatively much higher than the usual average reported by others. The writers have produced deep coma with much lower dosages in other institutions. The high dosage here is attributed to the high carbohydrate diet routinely given in Highland Hospital. In eight occurrences of protracted shock, it was noted that the patients subsequently went into deep shock on less insulin than before the protracted shock, indicating sensitization. In three instances, the reverse occurred; the patients required larger doses to go into coma than had originally produced protracted shock. Because of this unpredictable variation, it is recommended that the dose following a protracted shock be cut in half and then be gradually increased until deep shock is reached again.

The improvements following protracted shock are frequently very dramatic. The first case shows a sudden improvement despite the fact that the psychosis had steadily progressed for six years.

Case Reports

Case 1. A 28-year-old white minister had gradually withdrawn from his environment, had had increasing difficulty in concentrating and had appeared preoccupied. In spite of those symptoms, which had appeared in theological school, he had managed to finish his seminary training within the next year; but it was noted that, whereas he had previously made excellent grades, he could barely pass in the last year of his studies. After graduation, he took a pulpit in Louisiana. There, he became increasingly worried about sexual and religious matters. Because of his increasing difficulty in concentrating, the preparation of sermons became almost impossible. One day, he wrote a letter to his deacon asking if he should confess publicly to his congregation his "sins," referring to his sexual preoccupation and religious doubts. The patient had always been somewhat resentful toward his father. Now, this antagonism intensified and turned into a more open hostility expressed in compulsive ideas of killing himself in his father's pres-

ence. It was also seen that all psychotic ideas became more acute in the presence of the father.

Finally, the patient was admitted to a psychiatric institution. There, it was felt that the psychosis progressed too far to expect any benefit from shock treatment. Later, he was transferred to Highland Hospital where he adjusted fairly well to the usual occupational therapy. During the following months, however, his tension and compulsive thinking became more intense, interfering with his adjustment and routine activities. He then underwent a course of 48 deep insulin shock treatments in each of which the medullary phase was reached, at which time each shock was interrupted. The improvement under this treatment was transient; compulsive thinking and ideas of reference decreased somewhat and allowed a moderate and brief relaxation. Soon the tension returned, catatonic symptoms appeared, particularly grimacing and extreme rigidity of posture. A course of 22 electric shock treatments proved of only temporary benefit. The sexual preoccupation, compulsive thinking and religious scruples soon increased his tension. He spent most of his time standing in his room extremely rigid, grimacing; he developed a coarse tremor of the entire body. Due to his tension his speech became explosive; in addition there was marked blocking. The patient was hardly able to walk, because of the psychomotor rigidity; at best he would take only extremely short steps in a manneristic fashion, spending five minutes to walk a distance of 50 yards.

He again was started on insulin shock treatments, and the dose had to be stepped up to 400 units before a satisfactorily deep reaction was reached. A dose of 380 units resulted only in subshock without loss of consciousness after three and one-half hours. On the day the patient received 400 units, he was in deep shock four hours after administration of insulin; the pupils were small and did not react to light. During the fourth hour, the temperature had risen to 101.2 and slight cyanosis of the lips was present; the pulse was 100 and fairly regular. The patient was left in this stage for 15 minutes, and then it was interrupted by nasal tube feeding. Ten minutes later, he became more cyanotic, and respirations were shallow and rapid (56 per minute). He was deliberately left in this condition for 20 minutes; and then 160 cc. of 33 1/3 per

cent glucose and 20 mgm. thiamine hydrochloride were given intravenously. Immediately, the man's face became flushed, the pupils dilated and there was extreme restlessness; the pulse increased to 160 but was of good quality. However, the patient did not respond to any stimuli. Two and one-half hours after the tube feeding, 2 cc. of "Novaldine" (pyrazolon derivative, Winthrop) were given intramuscularly. The restlessness subsided within the next half hour, and the patient began to respond to stimuli. He asked for fluids and drank freely. Upon questioning, he said he was feeling "pretty good." After two more hours, the patient became drowsy again; the temperature, which had fallen, rose again to 101.2. Twenty minutes after another novaldine injection, he responded well.

Marked psychiatric improvement was noted; all grimacing had disappeared, the man seemed to be at ease, talked freely and without hesitation, his gait was normal, he swung his arms freely and did not hold them tightly to the body as he had done prior to the protracted shock. That evening, he asked permission to telephone his family and carried on a normal conversation. After that, he denied preoccupation about sexual and religious matters, did not show compulsive thinking or ideas of reference, took interest in the activities around him and entered into them with enjoyment. To prevent a relapse, insulin shock treatment was continued after an interval of 10 days. After 10 more comas, he again had a protracted shock which was similar to the first one. During this course of treatment, the patient received 15 deep shocks including the two protracted ones.

After the treatment was discontinued, the clergyman's father visited him. During the visit, the patient was completely at ease; and he carried on an animated conversation without the former compulsive thinking that he had to kill himself in his father's presence. The patient's condition is very much improved at the present time in comparison with that during the past one and one-half years. The most outstanding disturbances in the psychomotor sphere, the catatonic phenomena and the compulsive thinking have completely disappeared. It is interesting that the less marked symptoms, in the fields of emotional response, apprehension and indifference, have less completely improved. The patient is still

somewhat shy, does not show sufficient interest in his environment and is not very concerned about his future.

Case 2. This 19-year-old white male patient's first psychotic symptoms, difficulty in concentrating, auditory hallucinations, and ideas of reference and grandeur, appeared four years previous to treatment. The psychotic ideas had been increasing steadily; schizophrenic arrogance toward his surroundings made a satisfactory adjustment impossible; scattering and objectless laughter became more evident. There are several frank schizophrenic psychoses and schizoid personalities among the close relatives.

Insulin shock treatment was started without great expectations. The patient reacted with deep shock to 210 units. His second coma was a protracted shock. After 100 cc. of glucose intravenously, the patient became extremely restless; he had dilated pupils, and a flushed face combined with slight cyanosis; his temperature rose to 102.8; the pulse was over 200; respiration rose to 48. Because of the shallow and rapid respiration, the developing of a more pronounced cyanosis, and a fast, weak pulse, the patient received 3 cc. of coramine intravenously. The restlessness and the acute general condition improved, but he remained unresponsive during the next eight hours. He received then 2 cc. of novaldine intramuscularly. Within the next half hour, he started to respond; the restlessness disappeared completely, and the temperature dropped to normal. He talked and took fluids freely but was temporarily disoriented. He showed retrograde amnesia for a period of a week; however, those signs cleared up after two days. After the protracted shock, the patient completely corrected his ideas of grandeur and of reference; he was pleasant and cooperative and the former apprehension and schizophrenic arrogance disappeared. The young man was less circumstantial and stereotyped in his thinking; but since this was not completely corrected, shock treatment was resumed after 10 days. The shock dose, incidentally, had dropped to 175 units. The patient had additional protracted shocks during the awakening from his third, eleventh, twenty-third and thirtieth comas. During the third protracted shock, his condition was more severe than during the other similar reactions. His restlessness was more pronounced, the maximal temperature was 106.4, the pulse 198 and respiration 64. The threatening acute

symptoms were improved with glucose and coramine intravenously, and later with 600 cc. of saline solution by hypodermoclysis. On this occasion, novaldine was given at a stage when the patient already reacted to pain but was still in a stuporous state. Twenty minutes after he had received novaldine, he also responded verbally.

Insulin shock treatment was discontinued after the fourth protracted shock (a total number of 30 deep comas) as the patient was almost fully recovered; there were no psychotic ideas; and he showed very good insight into his condition. He was still somewhat circumstantial in expressing his thoughts but not pathologically so. The young man was dismissed; and, at present, he is adjusting successfully as a student in an art school in Washington.

Case 3. This patient is a 29-year-old white woman who has always been somewhat reserved and of retiring type. A few days after the birth of her second child (a girl) she became psychotic for the first time (paranoid schizophrenia). Because of persecutory delusions, she jumped out of a window and fractured five vertebrae. On admission to the hospital, she was hallucinated, and had ideas of reference and persecutory delusions. Because of the fractured vertebrae, deep insulin shock treatment had to be delayed for four months. To relieve her tension, subshock treatment was given during that time. After routine insulin shock treatment was started, she did not show any improvement with 27 deep shocks, although in each of them the medullary phase was reached. In the twenty-eighth deep shock, the medullary phase was intentionally prolonged over one-half hour. The patient did not respond well within 20 minutes after she had received 200 gms. of sugar by nasal tube; she became restless; her pupils were dilated and reacted to light, her temperature rose to 101.2, the pulse was 160, respiration 48. Therefore, 60 cc. of glucose and 10 mgm. of thiamine hydrochloride were given intravenously. Within the next 30 minutes, she responded better to stimuli, the restlessness diminished, the pupils contracted somewhat, and she was able to take fluids by mouth. When those signs of the protracted shock had completely disappeared, the patient seemed mentally clearer and her suspicion was less pronounced. Up to that time, she was extremely resentful toward hospitalization because, in her opinion,

"there was nothing wrong." She now was also less seclusive and indifferent; she showed some interest in the hospital activities.

A more pronounced betterment began with the next prolonged coma resulting from the thirty-sixth deep shock. On that day, the patient received 270 units of insulin as she had the previous day. She did not respond to tube feeding and remained in coma for 20 minutes afterward; the pulse increased to 160 and was weak; there was inspiratory stridor and cyanosis. After the injection of 40 cc. of glucose intravenously and 2 cc. of coramine, respiration and pulse improved, the cyanosis disappeared, she became restless and flushed, the pupils dilated. She did not respond to stimuli, so 2 cc. of novaldine were given. A half hour later, the patient responded when she was called. On the same evening, all protracted shock signs had subsided. The "voices" began to disappear and the woman realized their imaginative quality. Her apprehension and perplexity also diminished; she was sociable and friendly. The persecutory ideas were in the background, and she was far less concerned about them. From then on, the patient continued to improve steadily and finally could be dismissed as recovered after an additional number of deep shocks.

Case 4. This patient is a 19-year-old college girl who had always been shy and idealistic and had had some difficulties in adjustment. One and one-half years previous to the beginning of the treatment, the first psychotic signs appeared in the form of hypochondriacal delusions. The psychosis progressed slowly; difficulties in concentration, a few auditory hallucinations, depersonalization, mannerisms and objectless laughter developed. Finally, she was admitted to Highland Hospital with the diagnosis of schizophrenia, hebephrenic type. She was treated with insulin shock therapy and went into deep shock with 95 units. Her awakening from the sixth shock was somewhat delayed; and, as during her previous shocks, her temperature rose to 102.8 during the hypoglycemia. (It is known that some patients' temperatures are elevated during the first shocks before they make satisfactory physiological adjustment.) The coma was interrupted by 40 cc. of glucose intravenously. Then, since she did not respond within the next 20 minutes, 35 more cc. of glucose intravenously were given, followed after 15 more minutes by 45 cc. of glucose and 30 mgm. of thiamine

hydrochloride intravenously. The patient became restless, the pulse was rapid, respiration increased, and the face was flushed. After another 15 minutes—that is 50 minutes after the first glucose injection—the patient received 200 gm. of sugar in 500 cc. of water by nasal tube. Forty-five minutes later, the restlessness diminished; the patient took fluids, and the state of consciousness improved progressively. After this delayed awakening, she appeared definitely but still not satisfactorily improved. She was less indifferent and showed more interest in her environment, was less sarcastic and antagonistic. Mannerisms and objectless laughter were somewhat decreased.

After a week's interval, shock treatment was resumed; it was necessary to increase the dosage gradually to 115 units. The fifteenth shock was again of the protracted type. The patient vomited five minutes after the gavage of 200 gm. of sugar in 500 cc. water; and, therefore, 40 cc. of glucose were given intravenously at once. On previous occasions, this had been a sufficient amount to bring the patient out of coma. This time she remained restless and did not respond for 15 minutes; therefore, glucose was repeated, together with 20 mgm. of thiamine hydrochloride. The patient still did not respond; her respiration was somewhat fast but of good quality, the temperature had risen to 100.4. She remained in coma for eight hours. About a half hour before she started to react, she received 2 cc. of novaldine intramuscularly. When she responded, she displayed expressive and receptive aphasia combined with disturbances of the body image. By the following day, these symptoms had disappeared; but the patient complained of numbness of hands and feet and appeared confused. On one occasion she poured milk on the floor, and, getting down on all fours, she tried to lap it up. She was disoriented as to time and place; at times, she confabulated and was very irritable. All those symptoms cleared during the next two days. The patient became euphoric, was pleasant and unusually responsive; she showed much more interest in her surroundings, she took active part in the hospital activities, and her mannerisms and objectless laughter almost completely disappeared. Only under great tension, within the psychotic constellation, was there occasional objectless laughter. The girl apologized for it like a child for a habit it is not supposed to

have. The patient said that until recently she had felt defeated, "But all of a sudden an idea came to me, and since then I have gotten hold of myself. I feel like a different person. I cannot explain the idea but it helped me a lot. I felt terrible . . . there was no hope in life. I lost all my ambition . . . I felt awfully defeated. Now I enjoy being able to eat and being able to do things. I have more confidence in myself . . . I had a nervous breakdown . . . it was the most terrible experience I ever had."

Compared with a Rorschach examination administered before treatment, another given five days after the protracted shock indicated an "organic syndrome" on one hand and improvement of her psychosis on the other.

IMPORTANT RORSCHACH FACTORS

	Before treatment	After treatment
R	23	34
F%	74	53
A%	26	26
At%	57	68
P	3	5
M	1	1
FC	0	2
CF	1	5
sum C	1	6
FM	0	4
$\frac{\text{VIII}+\text{IX}+\text{X}}{\text{R}}$ %	39	53
W%	39	24
D%	53	55
d%	4	9
Dd & S%	4	12 (mostly S)

The results of this examination coincide with the clinical findings, showing an increased emotional and intellectual responsiveness, lessened rigidity and diminished peculiarity in thinking. However, before the beginning of the treatment the patient showed only three of Piotrowski's[9, 10] organic signs, while after the protracted shock six were found.

DISCUSSION

These case histories may serve as illustration for nine out of 12 cases. In these nine, that is 75 per cent of a group of schizophrenic

patients, improvement of the psychosis was closely associated with protracted shock. There was either a sudden improvement immediately after the awakening; or the patients began to improve gradually but steadily from then on. Some of the cases had not responded favorably to previous insulin or electric shock treatment.

It is interesting that usually the symptoms which are most in conflict with reality disappear first. The improvement is of different extent, but in none of the writers' cases did detailed examination show complete recovery. The significance of the protracted shock might be compared with that of the macrometric screw of the microscope. To obtain a more minute adjustment in the patient's relation to his environment, one must continue with the usual deep shock treatment and supporting psychotherapy.

None of the writers' patients showed any permanent clinical damage nor did they have a fatality. The complications so far are as follows:

	Number of patients	Occurrences
Paresthesia with or without hypoesthesia	9	18
Korsakow-like syndrome*	6	7
Euphoria	4	5
Hemiplegia	2	4
Aphasia	4	5
Apraxia	4	5
Difficulty in spatial orientation	1	1

*The writers prefer the expression Korsakow-like syndrome to the Korsakow syndrome, because frequently the confabulation or disorientation was more or less in the background; however, the amnesic factor was always present.

This list shows that paresthesia is the most frequent symptom. Mostly it is a numbness of fingers and toes; during the shock, those frequently are found to be cyanotic. In a few cases, a hypoesthesia of glove and stocking type was present which disappeared after several days or weeks. Some of these patients also complained that food lost its taste, but there were no changes on testing the four principal taste qualities (sour, bitter, salty, sweet). Five of the patients complained repeatedly during the awakening period (independently from the protracted shock) of severe sharp pains in their ankles. On several occasions, it was not possible to palpate the pulse of the dorsalis pedis artery. W. Kraulis[3] described

a patient who complained about severe pains in the left arm after the awakening from protracted shock. There were swelling, anesthesia and cyanosis of the whole arm followed by serous blisters in that region. Within the next few days, the pain and, after a few weeks, the other symptoms completely disappeared. Kraulis attributed those symptoms to an "angioneurotic process." Although the writers never observed such severe symptoms, they believe that the pains during the awakening period and the paresthesia in their patients might be based on a similar mechanism, but less severe than in Kraulis' case. This opinion is supported by the cyanosis of the distal ends of the fingers and toes, and by the frequently absent pulse of the dorsalis pedis artery in many of their cases.*

The next most frequently found symptom is the Korsakow-like, or better, the "organic syndrome" (Bleuler). Case 4 is the best example of that type of reaction, which occurred in six patients. In four of them, it was combined with euphoria. Those patients had memory defects, particularly of the recent past; they were disoriented, mostly as to time, but frequently also as to place, and they filled in the memory defects with confabulations. Frequently, judgment was noticeably defective; some of these patients were temporarily irritable; the emotional response changed quickly from one extreme to the other and was quite out of proportion to the situation ("affective incontinence," Bleuler). There were noticeable changes in the Rorschach test as the results in Case 4 indicate. Here, there was a marked tendency to perseveration and hypochondriacal preoccupation (increase of At%); an increase of emotional lability (marked increase of CF—the form elements of some of those responses are poor); lack of sufficiently good intellectual control and of satisfactory inner productivity (1 M); and an increase of factors indicating primitive layers of the personality (FM). Before insulin shock treatment was started, there were three of Piotrowski's "organic signs." Five days after the protracted shock, they had increased to six. Since the patient's "or-

*K. Stern, T. E. Dancey, F. L. McNaughton attributed such paresthesias to "pathological changes in peripheral nerves and nerve endings following severe hypoglycemia." They based that interpretation upon their observation that the paresthesias were not connected with pain or cyanosis. "Sensory disturbances following insulin treatment of psychoses;" J. N. M. D., 95:183; February, 1942.)

ganic syndrome" had reached its peak two days previously, one might assume that more organic signs probably would have been found at that time. The Rorschach findings after the shock indicated a normal "manner of approach," while there had been a marked tendency for generalization previous to the treatment, a symptom frequently found in schizophrenia; and, as already pointed out, the intellectual and emotional responsiveness improved after treatment, and the rigidity and peculiarity in thinking lessened.

In some cases, aphasic and apractic disturbances were observed following the awakening period. In two cases, these symptoms appeared, together with hemiplegia, and in another with disturbances of the conception of space.[11] A detailed discussion of these symptoms goes beyond the present scope of this paper. However, such disturbances certainly indicate damage or prolonged depression of different sections of the brain. All these evidences of pathological changes of the brain disappeared without clinical residuum after several hours. Different experimental investigations in animals and histopathological studies in cases which came to autopsy[12, 13] show primarily vascular changes, particularly in the cortex but also in all other sections of the brain. There are hyperemia and small perivascular changes with necrosis and loss of ganglion cells. Risak[14] and Eppinger showed that pyrazolon derivatives decrease the vascular permeability; that suggested to the writers the use of novaldine (sodium phenyldimethylpyrazolonmethylaminomethansulfonate) in the treatment of protracted shock. Satisfactory results were obtained by giving 2 cc. intravenously or intramuscularly after the acute complications of the protracted shock (acute respiratory or vasomotor complications) had disappeared. In one case, the temperature dropped from 106.4 to 103.8, and the respiration, pulse rate and motor restlessness gradually decreased within one-half hour after the injection of novaldine; the patient began to react to stimuli, and the stupor became less deep. In general, novaldine is repeated after two hours and usually given then intramuscularly in order to obtain more prolonged effects. Several patients reacted promptly to this procedure; in some of them previous thiamine hydrochloride injections in even high doses (40 to 50 mgm.) had been without marked effect. On the other hand, the con-

dition of some patients was not influenced by novaldine but was helped by thiamine hydrochloride as recommended by Frostig[8] and Freudenberg. Therefore, the writers now use the following routine therapy in protracted shock. If the patient does not react to tube feeding within 20 minutes, glucose is given intravenously together with 10 to 20 mgm. of thiamine hydrochloride. (In possible acute vital complications, respiratory failure is treated with lobeline intravenously; oxygen is given if indicated; and coramine is used in vasomotor incidents.) If the restlessness, with elevation of temperature, increased respiration and pulse rate, continues and the patient does not respond, 2 cc. of novaldine are administered intravenously or intramuscularly depending on the extent of the symptoms. The dose of 2 cc. of novaldine intramuscularly is repeated twice or three times on the same day at intervals of two hours as necessary. As already pointed out, the writers' patients receive a diet high in carbohydrates.

With this routine, there has not been any fatality; and coma has not lasted longer than eight hours, this in spite of the fact that the medullary phase was prolonged up to one hour. Originally, it was assumed that the occurrence of protracted shock excluded the patient from further treatment. At present, the writers merely wait until all the immediate complications and residual symptoms of the protracted shock have disappeared before resuming treatment. Some of the patients reported here have had as many as four protracted shocks during the course of treatment without any permanent clinical damage.

Based on the writers' experience, its seems advisable to prolong the medullary phase over a period of one-half to one hour in patients who prove "psychologically" resistant to the usual insulin shock treatment. Of course, one must observe carefully the patient's condition at this stage. The eye symptoms, together with pulse and respiration, are very reliable indicators of the safety of the shock.[7] (As it is known, in this condition, the pupils are pinpoint, frequently irregular, and do not react to light; corneal reflexes are much decreased or absent. The eyes are fixed in their position, nystagmus cannot be elicited. If the pulse drops much below 60 or if there are abrupt changes in rate or rhythm, the shock must be interrupted.) It is known now that in some cases only

such a deep treatment is helpful. Although a protracted shock results frequently from prolonging the medullary phase, the great percentage of improvements in previously resistant cases justifies use of such prolongation.

It seems that structural damage, particularly to the frontal lobes, is beneficial. Freeman[15, 16] and others pointed that matter out in a number of cases in which it was shown by their prefrontal lobotomy. All the pathological brain changes following protracted shock receded clinically in all the writers' cases after a comparatively short time. The improvement following showed that the patients actually had improved in content of psychotic ideas and not simply in the apprehension shown toward them.

Freeman and Watts[17] theorize that prefrontal lobotomy alters the functions of the "super-ego," and suggest that the individual's ability to project the super-ego into reality becomes reduced. Because of the damage of that projection-function, the patient loses his foresight and his concern for his symptoms, but not the symptoms proper. As already mentioned, the writers could notice that in their cases the symptoms most conflicting with reality disappeared first. Apparently the structural and functional damage alters the critical requirements and capacity of the super-ego. According to Freud[18] the super-ego plays an essential part in the genesis of the schizophrenic psychosis. By reducing the rigid and highly idealistic super-ego of the schizophrenic, the psychotic conflict lessens or disappears; and the patient becomes capable of constructing new relations with his environment. That is the best time for combining supportive psychotherapy with shock treatment. Further work in this direction will have to substantiate these hypothetical considerations.

Summary

1. The results of a total group of 25 prolonged shocks are described (six additional protracted shocks were observed after the completion of this paper). There was no fatality or permanent clinical damage.

2. The protracted shocks were attributed to prolonging the medullary phase of the hypoglycemia up to one hour.

3. The comatose phase following the prolonged shocks lasted from three and one-half to 15 hours and the stupor following from seven to 72 hours.

4. A change of shock dose may be necessary after the occurrence of protracted shock.

5. In 75 per cent of all patients with protracted shock, a definite improvement was noticed after its incidence. The greater number of those patients had proved resistant to previous shock therapy.

6. Transient complications were paresthesia (probably of vasomotor origin), a Korksakow-like syndrome, euphoria and hemiplegia, with brain pathological signs of different types.

7. The administration of thiamine hydrochloride and novaldine was instituted for theoretical reasons. The clinical experience seems to emphasize the practicality of these.

8. A hypothetical explanation based upon psychobiological theories is discussed.

9. The deliberate use of protracted shocks is indicated in insulin shock treatment of schizophrenia when satisfactory psychiatric improvement does not occur or when previous shock therapies have been unsuccessful.

Highland Hospital
Asheville, N. C.

Psychiatric Department
Medical School, Duke University
Durham, N. C.

REFERENCES AND BIBLIOGRAPHY

1. Sakel, M.: Pharmacological shock treatment of schizophrenia. Nerv. Ment. Dis. Monogr. 62.

2. Wortis, J., and Lambert, R. H: Irreversible or hyperglycemic insulin coma. Am. J. Psychiat., 96:335, September, 1939.

3. Kraulis, W.: Protracted shock in the treatment of schizophrenia and results of the therapy. Am. J. Psychiat. Suppl. Vol., May, 1938.

4 Lester, D.: A study of prolonged coma following insulin shock. Am. J. Psychiat., 95:1083, March, 1939.

5. Braunmuehl, A. v.: Die Insulinschockbehandlung der Schizophrenie. Berlin, 1938.

6. Billig, O.: Insulin shock therapy. Sou. Med. and Surg., 103, December, 1941.

7. Frostig, J. P: Clinical observations in the insulin treatment of schizophrenia. Am. J. Psychiat., 97; March, 1940.

8. Frostig, J. P., Rossman, I. M., Cline, W. B., and Schwoerer, O.: Protracted shock: its cause and its prevention. Am. J. Psychiat., 98:192, September, 1941.

9. Piotrowski, Z.: The Rorschach inkblot method in organic disturbances of the central nervous system. J. N. M. D., 86:525, November, 1937.

10. Piotrowski, Z.: The Rorschach method as a prognostic aid in the insulin shock treatment of schizophrenics. PSYCHIAT. QUART., 15: October, 1941.

11 Gyarfas, K.: Disturbances in drawing during hypoglycemia. Confinia. Neurologica, 2:149, May, 1939.

12. Cammermeyer, J.: Über Gehirnveränderungen, entstanden unter Sakelscher Insulintherapie bei einem Schizophrenen. Zeitschrift f. d. ges. Neurol. und Psychiatr., 163:617, 1938.

13. Jansen, J., and Waaler, E.: Anatomisch-pathologische Veränderungen in Todesfällen durch Insulin-und Cardiazolschockbehandlung. Arch. f. Psychiatrie, 111:62, January, 1940.

14. Risak, E.: Zur Behandlung von Hirnhautentzündungen. Wiener klinische Wochenschrift, 49:310, March 6, 1936.

15. Freeman, W.: Brain-damaging therapeutics. Dis. Nerv. Sys., 2:83, March, 1941.

16. Freeman, W., and Watts, J. W.: The frontal lobes. North Carolina Med. J., 2:6, June, 1941.

17. Watts, J. W., and Freeman, W.: An interpretation of the functions of the frontal lobe based upon observation in 48 cases of pre-frontal lobotomy. Yale J. Biol. and Med., 11:527, 1939.

18. Freud, S.: Neurose und Psychose. Gesammelte Werke, 13:385, Imago, London, 1940.

19. Finley, K. H., and Brenner, C.: Neurohistopathology resulting from insulin and metrazol in monkeys. J. N. M. D., 92:379, September, 1940.

20. Freed, H., and Saxe, E.: Prolonged non-hypoglycemic coma occurring during the course of insulin shock. J. N. M. D., 90:216, August, 1939.

21. Goldman, D.: Prolonged coma after insulin hypoglycemia: clinical features and treatment. J. N. M. D., 92:157, August, 1940.

22. Kant, F.: Protracted shocks during insulin shock therapy and their treatment. J. N. M. D., 91, June, 1940.

23. Schilder, P.: Entwurf zu einer Psychiatrie auf psychoanalyt. Grundlage. Internat. Psychoanalyt. Verlag, 1925.

HYPOSENSITIVITY TO FOREIGN PROTEIN IN SCHIZOPHRENIC PATIENTS

BY H. B. MOLHOLM, M. D.

Introduction

A generalized hyporeactivity of various functions in schizophrenia has been observed and studied at the research service of the Worcester State Hospital. The results of these studies have recently been summarized by Angyal, Freeman, and Hoskins.[1] They found that the schizophrenic patient is hyporeactive in at least three major fields: general metabolism, functions of the vegetative nervous system, and functions of the central nervous system.

In the present investigation, the attempt is made to determine whether a hyporeactivity is present in the functions of immunity also, with the reaction to repeated intracutaneous injections of a protein used as an indicator.

It is well established that practically everyone can be sensitized to a foreign protein by repeated intracutaneous injections of it (Dujardin and Decamps,[2] Jones and Mote,[3] Mote and Jones,[4] Simon and Rackemann[5]). The degree of variation in sensitivity from person to person has been only partially determined. Since considerable interindividual variation may be expected, only distinctly large differences can form the basis for valid distinction between groups.

Procedure

The development of hypersensitivity to guinea pig serum, injected intracutaneously at weekly intervals, was studied in a group of 12 schizophrenic male patients and in a control group of 12 unselected male subjects. Guinea pig serum was used because, as Simon and Rackemann[5] have pointed out, it rarely acts as an antigen in ordinary life. This serum was buffered with normal saline solution; a dilution of 1:100 was used in all experiments. One-tenth of 1 per cent of phenol was added as a preservative, and a new lot of serum was prepared only every third or fourth week instead of every week as was done by Simon and Rackemann.[5] One-tenth of 1 cc. of this diluted serum was injected intracutaneously in the flexor surface of the forearm. The successive weekly injec-

tions were alternated between the arms, the first injection in the left, the second in the right, and so on. Both patients and normal subjects had injections from the same lot of serum on the same day and at the same time.

The first evidence of sensitization to a foreign protein as detected in the skin is a delayed erythematous reaction which appears at the site of injection in about 24 hours. After this delayed type of hypersensitivity has developed, a few additional injections result in the development of an immediate reaction, with a residual delayed reaction. This immediate reaction, which appears about 10 or 15 minutes after the injection, consists of a raised wheal at the site of injection and a surrounding erythematous flare. With a few further injections, the wheal and the surrounding flare become more prominent, and there is little or no trace of the injection after 24 hours. After the immediate reaction has reached its maximum of development; it probably begins to decrease in intensity with still further injections (Phillips[6]).

The cutaneous reactions to these injections were measured with a millimeter scale. If the reacting areas of the skin were elliptical, instead of being circular, both their long and short axes were measured. Observations and measurements were made after each injection at the following times: the first after 10 to 15 minutes, the second after one hour, the third after nine hours, and the fourth after 24 hours. In this way, the maximum reaction to each injection was observed and measured. Each of the 12 patients received 13 injections at weekly intervals, but only nine of the 12 control subjects received 13. One subject received 11; two others received only nine. Consequently, the statistical analysis is limited to the findings of the first nine injections. The general description of the findings is, however, based on the 13 injections, because the findings of the last four emphasize what the analysis of the findings of the first nine shows.

Results

Various differences were found between the cutaneous responses of the schizophrenic patients and those of the control subjects. One of the most striking of these differences is the one between the mean areas of maximum erythematous reaction of the patients to the successive injections and those of the normal subjects to the

corresponding injections. This difference is represented graphically in Figure 1, where the mean area of maximum erythema in square millimeters is shown on the ordinate and the number of the injection on the abscissa. Figure 1 shows that in terms of maximum erythema the mean reaction of the patients to the successive injections was less vigorous than that of the normal subjects. This difference is statistically highly significant with a probability of less than .01 that the difference may be due to chance.

FIGURE 1

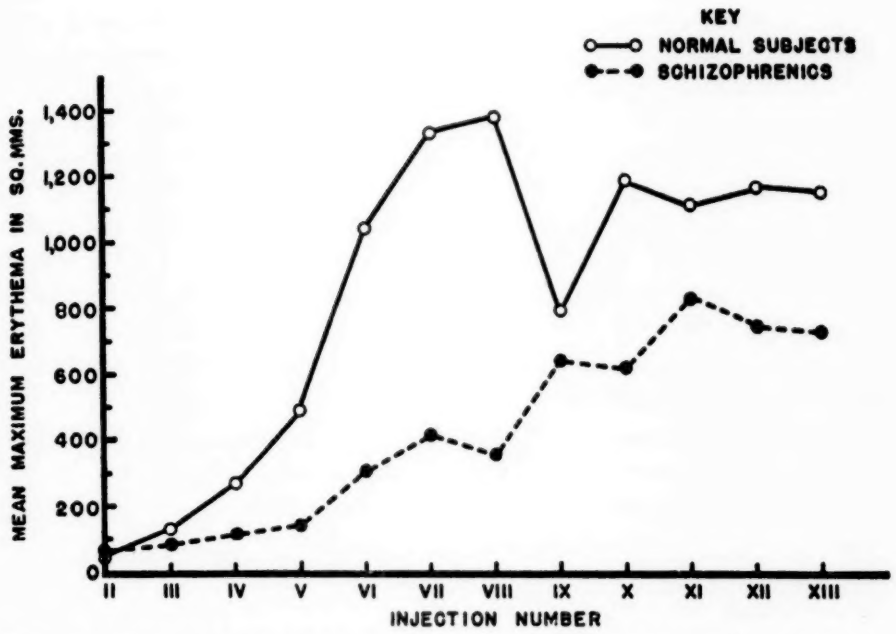


Figure 1. Mean maximum erythematous reactions of schizophrenic male patients and of unselected male normal control subjects to repeated intracutaneous injections of 1:100 guinea pig serum

A further analysis of the data obtained on the successive injections indicates that a process of sensitization was being activated and developed by the repeated injections. To emphasize this finding, the successive data on the patients in Figure 1 have been connected with a broken line and those on the normal subjects with an

unbroken line. An inspection of the two sets of data reveals that, during the first half of the experiment, the mean maximum erythema increased with each succeeding injection. This finding suggests that a sensitization to foreign protein was being developed. The validity of this finding gains greater weight if one considers the results obtained by an analysis of variance which was applied to the present data. This analysis shows: (1) that the responses of a given subject to the various injections are highly consistent; and (2) that the interindividual consistency of the groups is highly significant. The probability that either of these findings is due to chance is also less than .01.

It should be noted that the erythema of the delayed reaction is much more inflammatory in nature than that of the immediate reaction. Despite this difference between the respective erythemas of the delayed and the immediate reactions, no distinction was made between them so far as the measure of maximum erythematous reaction was concerned. This measure, which is quite valid from the operational point of view, was used to simplify the statistical handling of the data. This measure does, however, have the disadvantage of not bringing out all the details of the difference found between the reactions of the patients and those of the normal subjects. It will be convenient, therefore, to point out some of those details at this juncture.

In the first place, the patients and the normal control subjects differed in the same general way with respect both to the delayed and to the immediate reactions. That is, the patients' reactions were less than those of the normal controls, irrespective of whether the groups were compared with regard to the immediate reaction alone or the delayed reaction alone.

In the second place, three of the 12 patients did not have an immediate reaction to any of the 13 injections whereas all the control subjects had immediate reactions to the last four injections. Hence, in terms of immediate reactions, the mean sensitization of the patients after the thirteenth injection was less than that of the control subjects after the tenth. This difference gains added significance, considering the fact that an immediate reaction indicates a greater degree of sensitization than does a delayed reaction.

Control Experiments with Intracutaneous Injections of Histamine Phosphate

The difference found between the reactions of the patients and those of the control subjects could be due, either to a difference between their respective local vascular responses or to a difference between their respective responses to intracutaneous injections of foreign protein as such. If the former were the case, then the reactions of the patients to intracutaneous injections of a solution of histamine should differ from those of the control subjects in the same manner as their reactions to intracutaneous injections of foreign protein have been found to differ from those of the subjects. This is the more so, because there is a great similarity between a reaction to an intracuteneous injection of histamine and an immediate reaction to an intracutaneous injection of foreign protein. Furthermore, it is held by some investigators that an immediate reaction is due to the H-substance liberated in the local reaction to the injected foreign protein.

The local vascular responses of the patients were tested in the following preliminary manner. Three days after the tenth injection of guinea pig serum each patient received an injection intracutaneously in the left forearm of .1 cc. of a 1:3,000 solution of histamine phosphate. Each patient reacted to this injection with a wheal and a surrounding erythematous flare. These cutaneous reactions were measured several times during the course of their rise and decline, just as were those to the injections of guinea pig serum. No positive relationship was found between a patient's maximum reaction to the injection of histamine and his maximum reaction to the tenth injection of guinea pig serum. The absence of a positive relationship between the reactions to the histamine and to the guinea pig serum demonstrates that the difference found between the reactions of the patients and those of the control subjects to the guinea pig serum was probably due to a difference between their respective responses to the guinea pig serum specifically and not to a difference of the peripheral vasomotor mechanism in general.

Discussion

The finding that schizophrenic patients are in general hyposensitive to foreign protein can be used in different ways in the further study of schizophrenia. Angyal, Freeman and Hoskins[1] have already suggested that various functions in schizophrenia be represented in the form of a profile which would show what functions were involved and to what degree. The cutaneous reaction to repeated intracutaneous injections of a foreign protein can be added to the proposed profile of functions to be considered. On the other hand, schizophrenic patients can be studied, with respect to any function in which they are hyporeactive, by contrasting and comparing them with a selected group of subjects who are hyperreactive in the particular function. This is especially easy in the case of the schizophrenic's hyposensitivity to foreign protein, because there are many persons who are hypersensitive to foreign protein, that is, those who have hay fever or extrinsic asthma. The writer has already contrasted and compared schizophrenic patients with extrinsic asthmatic patients in a paper on the antagonism between schizophrenia and extrinsic asthmas.[7] In fact, the finding that schizophrenic patients would prove to be generally hyposensitive to foreign protein was predicted in terms of the hypothesis set forth in another study that there is a fundamental physiologic difference between those persons who have schizophrenia and those who have hay fever or extrinsic asthma. It is felt that the comparison of immunological reactions is a promising approach to the biological antagonism between certain pathological conditions and between certain forms of constitution.

Summary

1. The cutaneous responses to intradermal injections of guinea pig serum, repeated weekly for 13 weeks, have been studied in a group of 12 schizophrenic male patients and in a group of 12 unselected male control subjects.

2. In all patients and in all normal controls, a process of sensitization was developed by the successive injections.

3. It was found that the mean areas of maximum erythematous skin reaction of the patients to the successive injections were significantly less than those of the normal control subjects.

4. One must distinguish between immediate and delayed skin reaction. The former indicates greater sensitivity. All control subjects had immediate reaction to the last four injections, whereas three patients did not have immediate reaction to any of the 13 injections.

5. In order to determine whether the difference between patients and normal controls is due to a difference in their local vascular mechanisms or to their sensitivity to foreign proteins specifically, an intracutaneous injection of histamine was given to each patient. No positive correlation was found between the reaction to histamine and the reaction to guinea pig serum. This finding suggests that the differences found between patients and control subjects are actually differences of immunological reactions.

6. The hyposensitivity of the schizophrenic patients to foreign protein is a special manifestation of their general hyporeactivity.

7. It is suggested that the comparison of immunological responses may be profitably used in the study of biological antagonism between various pathological conditions.

Research Service
Worcester State Hospital
Worcester, Mass.

REFERENCES

1. Angyal, A., Freeman, H., and Hoskins, R. G.: Physiologic aspects of schizophrenic withdrawal. Arch. Neurol. and Psychiat., 44:621, 1940.
2. Dujardin, B., et Decamps, N.: Influence d'une sensibilisation expérimentale sur l'allergie et les heteroallergies. Ann. et Bull. de la Soc. Roy. de Sciences Med. et Nat. de Bruxelles. P. 100, 1924.
3. Jones, T. D., and Mote, J. R.: The phases of foreign protein sensitization in human beings. N. E. J. Med., 210:120, 1934.
4. Mote, J. R., and Jones, T. D.: The development of foreign protein sensitization in human beings. J. Immunology, 30:149, 1936.
5. Simon, F. A., and Rackemann, F. M.: The development of hypersensitiveness. J. Allergy, 5:439, 1934.
6. Phillips, E. W.: Intradermal pollen therapy during the attack. J. Allergy, 5:29, 1933.
7. Molholm, H. B.: The antagonism between schizophrenia and extrinsic asthma. In preparation, 1941.

A FOLLOWUP STUDY OF 87 CASES OF DEMENTIA PRAECOX ONE TO FOUR YEARS AFTER TREATMENT WITH INSULIN HYPOGLYCEMIC THERAPY*

BY OSWALD J. McKENDREE, M. D.

Each new therapeutic agent which is added to the armamentarium for the treatment of dementia præcox and other psychoses brings new hope and courage with which to face problems which hitherto have been insurmountable or considered hopeless. As in all branches of medicine, hopes too frequently soar beyond normal limits; and it is only after a long period of observation, followed by an opportunity to evaluate what has been observed, that one can decide with any degree of accuracy the advantages and disadvantages of the new treatment which has been used. This paper is written with the hope that in a small way it will contribute toward the clarification of the value of insulin hypoglycemic therapy in the treatment of dementia præcox. Its contents are concerned with a followup study of 87 patients who had had dementia præcox, some of whom were observed by the writer in Utica State Hospital. Some, who were on parole, discharged or in boarding homes, were observed by the hospital's social service department; and some, where this was not possible, were reported on the basis of estimates of progress and present condition as of March, 1941, obtained through questionnaires sent to the relatives or friends who could give most accurately the information desired.

That figures can be made to prove almost any point is a common aphorism, and the numerous factors which influence the ultimate results must be kept in mind. Heilbrunn and Sternlieb[1] mention three such factors to explain the difference between their findings and those of Ross, Malzberg and Mueller, namely: the selection of cases, the evaluation of results and the technique. Diagnostic policies vary from one institution to another, thus presenting yet another source of variation. A certain percentage of patients might be improving and might recover anyway even though insulin were not administered.

Of the 87 patients under consideration, 50 were male and 37 were female; the oldest was 42 and the youngest 16. The total dos-

*Read at the interhospital conference at Utica State Hospital, April 25, 1941.

age of insulin ranged from 540 to 20,720 units; the aggregate hours of hypoglycemia varied from 33 to 351. Eleven years was the longest duration of psychosis; two months the shortest.

Two tables have been prepared to show results: (1.) after the termination of treatment and (2.) one and one-half to four years following termination of treatment. A third table was made for comparison. Table 1 gives results at the end of treatment according to duration of psychosis. Table 2 is for comparison and Table 3 contains the findings one and one-half to four years after termination of hypoglycemic therapy, also classified by duration of psychosis.

TABLE 1. RESULTS AT END OF TREATMENT ACCORDING TO DURATION OF PSYCHOSIS

Duration of psychosis	Worse	Percentage of worse cases	Unimproved	Percentage of unimproved cases	Improved	Percentage of improved cases	Much improved	Percentage of much improved cases	Recovered	Percentage of recovered cases	Totals	Total percentages	Parole	Percentage of cases on parole	Dead	Percentage of dead
0- 6 mo.	0	0	0	0	0	0	1	1.1	10	11.5	11	12.6	12	13.8	0	0
6-12 mo.	0	0	3	3.4	1	1.1	4	4.6	7	8.0	15	17.1	11	12.5	0	0
1- 2 yr.	0	0	5	5.7	4	4.6	8	9.2	5	5.7	22	25.2	15	17.2	0	0
2- 3 yr.	0	0	2	2.3	2	2.3	1	1.1	1	1.1	6	6.8	4	4.6	0	0
3- 5 yr.	1	1.1	7	8.0	5	5.7	3	3.4	3	3.4	19	21.6	4	4.6	1	1.1
5-10 yr.	0	0	3	3.4	7	8.0	3	3.4	0	0	13	14.8	2	2.3	2	2.3
10-15 yr.	0	0	0	0	1	1.1	0	0	0	0	1	1.1	0	0	0	0
Totals	1	1.1	20	22.8	20	22.8	20	22.8	26	29.7	87	99.2	48	55.0	3	3.4

Table 1 shows that of the 87 cases treated one or 1.1 per cent had become worse, 20 or 22.8 per cent were unimproved, 20 were improved and 20 much improved, while 26 or 29.7 per cent recovered.* Furthermore, 48, amounting to 55.0 per cent of the total, were paroled; 3 or 3.4 per cent had died. Of the latter three, two died of subsequent pulmonary tuberculosis, and one following a brief illness with pulmonary complications—lobar pneumonia and lung abscess which unfortunately for the patient developed within 24 hours after the treatment which was to have been his last. As

*Unimproved, improved, much improved and recovered—terminology used by Department of Mental Hygiene, State of New York.

far as duration of psychosis is concerned, the fact that early treatment produces the best results is illustrated fairly well; all except one of those falling into the 0-6 months group recovering, the remaining one being much improved. In all, 75.3 per cent were improved to a greater or lesser degree, whereas 23.9 per cent were not helped.

In discussing the percentages given in Table 1, the writer will use figures employed by Ross and Malzberg[2] in their control group of 1,039 New York State Hospital first admissions who had had no shock treatment to indicate in percentages the conditions of patients with dementia præcox at the termination of treatment. For this purpose, Table 2 is prepared.

TABLE 2

	Total	Recovered	Much improved	Improved	Unimproved	Died
Insulin	100	29.7	22.8	22.8	22.8	3.4
Control	100	3.5	11.2	7.4	73.3	4.6

If one can agree that comparison with this control group is valid, the insulin-treatment figures are superior to those of the controls by more than 50 per cent. Specifically, recoveries are in excess of those in the control groups by 26.2 per cent; the much improved cases are greater by 11.6 per cent; the improved by 15.4 per cent; and the unimproved are less by 50.5 per cent. There were 1.2 per cent more deaths in the control group. The total percentage of improvement to a greater or lesser degree among the insulin treated patients was 75.3 per cent compared with 32.1 per cent among the controls.

The results of Table 3 are no less interesting. After an observation period of one and one-half to four years, one finds four patients or 4.4 per cent worse, 42 or 48.3 per cent unimproved, eight or 9.1 per cent improved, 15 or 17.1 per cent much improved, 18 or 20.7 per cent recovered. Thirty-one were out of the hospital—either on parole, discharged, or in family care—making a percentage for this item of 35.5. Fourteen patients, or 16 per cent of the 87, had experienced relapses. There was an increase of one in the number who had died, this death being due to injuries suffered in a motorcycle accident.

TABLE 3. RESULTS ONE AND ONE-HALF TO FOUR YEARS AFTER TERMINATION OF TREATMENT ACCORDING TO DURATION OF PSYCHOSIS

Duration of psychosis	Worse	Percentage of worse cases	Unimproved	Percentage of unimproved cases	Improved	Percentage of improved cases	Much improved	Percentage of much improved cases	Recovered	Percentage of recovered cases	Totals	Total percentages	On parole or discharged or family care	Percentage on parole or discharged or family care	Relapses	Percentage of relapses	Dead	Percentage of dead
0- 6 mo.	1	1.1	0	0	0	0	3	3.4	7	8.0	11	12.5	12	13.8	4	4.6	0	0
6-12 mo.....	1	1.1	7	8.0	0	0	0	0	6	7.0	14	16.1	7	8.0	0	0	0	0
1- 2 yr.	0	0	11	12.6	3	3.4	2	2.3	2	2.3	18	20.6	5	5.7	5	5.7	1	1.1
2- 3 yr.	0	0	6	7.0	0	0	2	2.3	1	1.1	9	10.4	2	2.3	0	0	0	0
3- 5 yr.	1	1.1	8	9.2	3	3.4	3	3.4	2	2.3	17	19.5	2	2.3	5	5.7	3	3.4
5-10 yr.	1	1.1	9	10.4	2	2.3	5	5.7	0	0	17	19.5	3	3.4	0	0	0	0
10-15 yr.	0	0	1	1.1	0	0	0	0	0	0	1	1.1	0	0	0	0	0	0
Totals	4	4.4	42	48.3	9	9.1	15	17.1	19	20.7	87	99.7	31	35.5	14	16.0	4	4.5

By comparison with Table 1, there are three more patients who are worse, or 3.4 per cent. Twenty-two more are unimproved, or 25.3 per cent. The item, improved, shows a loss of 12 or 13.8 per cent; much improved drops from 20 to 15, a loss of 5.7 per cent. Patients out of the hospital decrease by 17 or 19.5 per cent. Thus 41, or 46.9 per cent, after a period of from one and one-half to 4 years continued improved to a greater or lesser degree. This figure compares very favorably with those of Fuller and Johnston[3] who, in a study of the duration of hospital life for patients, gave the last reported outcome of treatment for three groups of first admissions with dementia præcox. Their first group consisted of 2,481 patients who had been admitted to the New York civil State hospitals between 1909 and 1911 and whose hospital records had been followed up to June 30, 1928. Of this group, 620, or 25.0 per cent were reported recovered or improved. A second group of 3,549 such patients admitted between 1914 and 1916, had also been followed up to June 30, 1928. Of this group 1,013 or 28.6 per cent were finally described as recovered or improved. The third group consisted of 4,119 cases of whom 1,128 or 27.4 per cent were ultimately considered recovered or improved.

On the other hand, Whitehead,[4] studying a series of 102 consecutive cases of dementia præcox without insulin therapy, found that 51 per cent were improved five years after admission to the Utica State Hospital. Palmer,[5] making a similar study, found that 41 per cent of the patients whom he investigated had been discharged from the hospital and had not been readmitted over a period of 12 years. The cases of both these investigators were also culled from the files of the Utica State Hospital.

Thus, it would seem that considerable variance is present in the control figures which are available for use at the present time.

Finally, a comparison of average duration of parole or placement in family care before and after the administration of insulin was possible in seven cases. In all except one instance, the average duration after hypoglycemic treatment was greater than that before. The average for all seven cases was 102 days before and 271 days after insulin therapy had been given, an increase of over 50 per cent. Of course, too much dependance cannot be placed in figures derived from such a small number of cases but at least the results suggest further followup study along this line.

Conclusions

1. The number of cases in this study is so small that no great significance can be placed on the subdivisions as to duration of psychosis into which the statistics are broken down.

2. It would seem that some significance might be attached to figures embracing the groups as a whole which deal with improvement of a greater or lesser degree. The same might be said of those embracing unimprovement.

3. Considerable variance exists between figures obtained by investigators who have attempted to compile statistics for the pre-insulin era with which to compare results obtained by the use of hypoglycemic therapy. Some figures, when compared with data such as that compiled in Table 3, place insulin hypoglycemic therapy in a favorable light; others tend to discredit this particular form of treatment.

4. It would seem that standard requirements of research should be designated by suitable authorities so that the same type of investigation under nearly identical conditions could be carried out

with material available in the preshock and postshock treatment eras. In this way, comparisons could be made which would show with some degree of accuracy the relative value of newer and older methods of treatment.

Utica State Hospital
Utica, New York

REFERENCES

1. Heilbrunn, G., and Sternlieb, R.: Insulin therapy of schizophrenia in the Elgin State Hospital. Am. J. Psychiat., 96:1204, 1940
2. Ross, J. R., and Malzberg, B.: A review of the results of pharmacological shock therapy and the metrazol convulsion therapy in New York State. Am. J. Psychiat., 96:301, 1939.
3. Malzberg, B.: A follow-up study of patients with dementia precox treated with insulin in the New York Civil State Hospitals. Ment. Hygiene., XXIII:644, 1939, quoting Fuller, R. G., and Johnston, M.
4. Whitehead, D: Improvement and recovery rates in dementia præcox without insulin therapy. PSYCHIAT. QUART., 12:3:411, 1938.
5. Palmer, J.: The outcome of 100 "untreated" cases of schizophrenia. Unpublished paper.

JOINT ENDEAVORS OF THE ADMINISTRATIVE PHYSICIAN AND PSYCHOTHERAPIST*

BY ROBERT T. MORSE, M. D., AND DOUGLAS NOBLE, M. D.

The past decade has seen a vast growth of interest in the therapeutic aspects of psychiatry. The various pharmacological approaches to treatment, the "shock therapies" and even admittedly "brain damaging" therapies have had or are having their day. Throughout this period, the oldest form of therapy in medicine; namely, psychotherapy has been quietly progressing, although in a considerably less spectacular manner. Many of our psychiatric hospitals have, gradually however, added trained psychotherapists to their staffs, physicians freed from administrative duties for intensive therapeutic work.

The success of such efforts, well illustrated in the work of Chapman and Sullivan, has necessitated careful studies of the means by which the functions of the administrative and psychotherapeutic staffs can jointly be made most effective.

It is the intention here to present one method, which has been found valuable for the use of intensive psychotherapy in the hospital; that is, dual management of the patient by administrative physician and psychotherapist. The concept of dual management, through which the administrative aspects of treatment are separated from the regularly scheduled psychotherapeutic sessions, was first described by W. C. Menninger, and developed later by Knight, Reider, Chassell and Bullard. This concept did not arise from theoretical considerations, but through bitter experience and became a necessity when one individual attempted to combine administrative duties with intensive psychotherapy of a patient. The plan of dual therapy has been adopted at Chestnut Lodge Sanitarium, in the feeling that it offers most advantage to the patient, since administration, as well as therapy, is based upon a dynamic concept of psychiatry in which an attempt is made to understand and meet the patient's needs.

It is well-known that psychotherapy constitutes a part of any medical problem, but only in relatively recent times have psychia-

*Read at the annual meeting of the American Psychiatric Association, Richmond, Va., May 6, 1941.

trists come to appreciate that all contacts the patient has within the hospital have psychotherapeutic import, for good or for ill. The administrative physician, for example, because he grants or withholds privileges which may mean to the patient justice or injustice, becomes a most significant person to the patient. This relationship is charged with great positive or negative therapeutic implications.

This problem first appears in the admission office. During this important interview an attitude is born which influences, often permanently, the patient's expectations of what will happen to him. The patient is told at this time, that he can look to the admitting physician, who becomes his administrator, for decisions as to privileges, medication and the like, and that another physician will undertake his treatment interviews. The admitting physician also has the opportunity of gaining the cooperation of the relatives by describing the hospital organization, including the plan of dual management, emphasizing its time-saving value from the therapeutic and economic standpoints. He tells the family to consult him on administrative matters, and explains, when necessary, that some patients talk more confidentially with a physician who is not in frequent contact with the family. Hostility between the patient and one or more relatives always exists, whether recognized or not, and the fewer contacts the therapist has with relatives, the less he is likely to be identified with the hated relative, with resultant difficulties in rapport.

In the course of daily practice, administrative attitudes are based upon the assumption that a good relationship with the therapist gives a feeling of security to the patient, which permits an individual, elastic attitude toward privileges. The administrator estimates the patient's needs and capacities to accept responsibility day by day, granting privileges accordingly. Thus, a patient depressed one day may temporarily be better the next and the opportunity of going out alone for as short a period as an hour may be given, or withdrawn with his changing reactions.

Some patients abuse this system by continually adducing reasons for the granting of special privileges. The administrator must be on the alert for this symptom and make his decision on the basis of the patient's overt behavior in the hospital group.

Some of the problems illustrated in the collaboration between administrator and therapist will be discussed under the headings of, Interpersonal Relationships of Therapist and Administrator, Management of the Psychotic Patient, Suicide, Alcoholism, Discharge Against Advice, Psychotherapy of the Family, and Erotic Attachments Between Patients.

INTERPERSONAL RELATIONSHIPS OF THERAPIST AND ADMINISTRATOR

The most vulnerable point in this form of dual management lies in the interpersonal relationships between the two physicians. The fact that all members of the sanatorium's staff serve both as administrators and therapists reduces the probability of disharmony. Nevertheless, doctors, as well as patients, are human; and because of their involvement in the life of the patient, or because of personal difficulty in delegating any part in the treatment of a patient to someone else, psychotherapists may find it hard to work with the administrator. Similarly, the administrative physician, because of incomplete knowledge of the dynamics involved, may himself act arbitrarily. We, as psychiatrists, are constantly reminding ourselves of the effect that the physician's words and behavior have upon the patient, but we need even more to remind ourselves that the patient's words and behavior have comparable effects upon us.

Since part of the conflict within the patient may serve to create disharmony between the therapist and administrative physician, it is important that both physicians maintain, as far as possible, an objective attitude toward each other in what is, of necessity, a triangular situation. The sex of the three individuals involved may complicate the problem. When one physician is male and the other female, the patient identifies them regularly with the parents. While this may favorably activate psychotherapy, it may also be a source of subtle attempts on the patient's part to provoke a conflict between the physicians. Likewise, when the patient is female and the two physicians male, unrecognized erotic transference phenomena may cloud objective management. Given a verbally effective, plausible patient, the potentialities for discord can be great unless each physician truly appreciates the problem.

Situations naturally arise in which there are differences of opinion as to the privileges which should be accorded certain patients. It has been the aim to vest ultimate authority with the administra-

tor, so that the patient may study his reactions to a reality over which neither he nor the therapist has any direct control. In some instances, daily conferences between therapist and administrator have proven valuable; in others, it has been found most profitable only to confer when significant problems arise.

Management of the Psychotic Patient

In the treatment of the psychotic patient, it has been found that rigid adherence to the non-administrative rôle of the psychotherapist is not practical since the needs of the psychotic at times demand that the administrator also function in a psychotherapeutic rôle. This develops when the patient discontinues therapeutic work because of interpersonal tensions with his therapist, and elects to ventilate to the administrator topics which he cannot discuss with his therapist at the time.

In the management of problems of difficult behavior, the administrator always urges the patient to review these with his therapist and try to trace their dynamics.

A paranoid young man intimidated the patients and personnel within his group by his aggressive behavior. The administrative physician talked frankly with him. The patient, after an explosion, became quieter and in his next interview with his psychotherapist, said: "The doctor put me in my place. I know that I disturb people. I must find out why."

Suicide

In the prevention of suicide, the relationship of the patient with the psychotherapist is of primary importance. A feeling of security with the administrator, a nurse or another patient may be of great additional value. Warnings of suicidal intent come both through information gained in therapeutic sessions or by observations of the administrative physician and nurses, and it is important to consider every channel. One patient revealed after two years of psychotherapy that her father had made a suicidal attempt. This had given rise to a latent suicidal drive, concerning the dynamics of which the staff had previously been ignorant. Suicidal gestures are more common than suicidal attempts, but there is an equal guard maintained against both. Attempts at suicide not intended as serious may become so accidentally.

Experience shows that some depressed patients want to be told what to do; and, with them, a firm attitude on the part of the administrative physician, not only meets this need for direction, but, if it stimulates hostility within them, will aid psychotherapy and diminish the suicidal risk.

In some instances of successful suicide, it would appear that there were no reliable prodromes, and that the failure of the physicians to prevent tragedy was due to a failure to establish sufficient rapport with the patient to become aware of suicidal intentions.

Alcoholism

The serious administrative problems that the alcoholic patients create, make the dual therapeutic method almost essential. Chestnut Lodge's administrative policy is rather permissive, since treatment usually progresses more smoothly if privileges are not punitively withheld. If the patient is endangering his life, disturbing others, or interfering with his therapy, privileges are withdrawn until he has had an opportunity to gain some insight into the dynamics involved. He is then restored to the privileged status. In exceptional instances privileges are withheld for a long time.

A schizoid, alcoholic man, drank heavily while under intensive treatment. Efforts of the administrator to handle the situation were fruitless. One day, the patient came back to the hospital intoxicated threatening to kill the administrative physician if his privileges were withdrawn. Despite this, he was placed on a closed ward. He insisted on telephoning his father to demand his removal from the hospital. His father urged him to remain. Shortly after this incident, his therapist reported that treatment had taken a strikingly progressive turn. The patient had said that immediately on hearing his father's voice he realized that it was the father and not the administrator with whom he was angry. With this insight, he became friendly with the administrator, and later asked him to continue his supervision after he left the hospital and was returning for psychotherapy. The patient, who recovered, still dates the turning point in his treatment to the occasion when his fantastic method of living was interrupted.

As a rule, it has been found inadvisable to urge a dissatisfied alcoholic patient to remain in the hospital against his will. Psycho-

therapy is rarely profitable under these circumstances. After leaving and experiencing one or two failures, some have returned to the sanatorium in a more serious frame of mind. A few who were discharged against advice did unexpectedly well, having gained and utilized more insight into their self-destructive impulses than their physicians were aware they had acquired.

Discharge Against Advice

Altogether, the experience in problems of discharge against advice has been similar to that reported by Kasanin and by Cook; namely, that the outcome of patients discharged in this manner was more favorable than was predicted. Dual management is useful when these situations arise, since the administrator is usually in a better tactical position than the therapist to insist on treatment. In some instances, despite the closest collaboration between administrator and therapist, family opposition will prevail. For instance, a young schizophrenic girl had been under treatment many months. Her family were chronically dissatisfied and finally insisted on removing her. When the time came to leave, however, the patient managed to organize herself from a panic state to the point of telling her family that she had benefited from treatment and had no intention of discontinuing it. They postponed their decision, but when, following a second threat of removal, the patient made a suicidal attempt they took matters into their own hands and discontinued treatment.

When problems of "discharged against advice" arise, there is an attempt to avoid tensions with the patient's family, so that the doors to the hospital will be open should there be a later wish on the part of the patient or his family to resume treatment.

Psychotherapy of the Family

Since psychiatric illnesses are related to early and recent interpersonal relationships, adjunct psychotherapy by the administrative physician with the family or the marital partner is most helpful.

A medical specialist, whose wife had been undergoing psychotherapy for many months, told the administrative physician that he agreed with the treatment, but thought that interviews were too

frequent. He was asked, "What would you think if a doctor in another specialty told you that he agreed with your prescription of a certain medicine, but that it was prescribed too often?" The doctor laughingly saw the point, and from then on gave full support to therapy.

To many a sensitive patient, the fact that the therapist even confers with the relatives implies that the therapist accepts their views of the patient's illness. If an interview between therapist and family is necessary, the therapist explains to the patient, prior to the interview, the necessity for it and later tells the patient at the time of the next meeting what occurred.

Sometimes an interview between the therapist and relative is of real value.

A schizophrenic patient, said on the day of his admission, "My illness dates from the time that my younger brother came into my business." There had been lifelong tension between the brothers, which the patient recognized and discussed with his therapist, suggesting that the brother could benefit from treatment. The therapist talked with the brother, who said that he, too, was going to pieces. The man was advised to consult a psychiatrist in his own city, and he has continued to receive treatment with benefit to himself and to the total situation.

Sexual Relationships Between Patients

In regard to attachments developing between patients, an individual appraisal of these is made and talked over by administrator and therapist. The writer avoids prohibition unless the attachments contain serious social implications, or dangerous elements which would obstruct therapy. Since such attachments are usually symptomatic, the administrative physician urges the patient to discuss them with his therapist.

A schizophrenic girl developed a homosexual interest in a nurse. This was a controlled situation, since the nurse discussed with the administrator and the psychotherapist the best ways of dealing with the patient's erotic manifestations. Where overt erotic interests develop between patients, active intervention may be indicated.

SUMMARY

1. A method has been described whereby patients undergoing intensive psychotherapy are jointly treated by a psychotherapist and by an administrative physician.

2. The method facilitates psychotherapy, since the therapist is free to give full attention to the patient's emotional problems.

3. Through contact with the administrative physician, whose dynamic point of view he appreciates, the patient derives additional security. This makes the method particularly valuable with suicidal patients.

4. The functions of the administrative physician are partly psychotherapeutic, especially in the case of the psychotic.

5. The method facilitates the adjunct psychotherapy of the family.

6. The technique of dual management typifies a current trend; namely, a convergence in attitude between intensive psychotherapy and administrative psychiatry.

Chestnut Lodge Sanitarium
Rockville, Md.

BIBLIOGRAPHY

Bullard, Dexter M.: The organization of psychoanalytic procedure in the hospital. J. N. M. D., 9:6, June, 1940.

Chassell, Joseph: Psychoanalytic therapy in a mental hospital. Psychiatry: Journal of the Biology and Pathology of Interpersonal Relations, 3:2, May, 1940.

Cook, Esther C., and Kasanin, Jacob: A study of one hundred cases discharged "Against Advice" from the Boston Psychopathic Hospital in 1925. Ment. Hyg., 15:1, January, 1931.

Knight, Reider, et al.: Bull., Menninger Clinic, 1, 1936-1937.

Menninger, William C.: The treatment of chronic alcohol addiction. Bull., Menninger Clinic, 2, 1938.

Noble, Douglas: Some factors in the treatment of schizophrenia. Psychiatry: Journal of the Biology and Pathology of Interpersonal Relations, 4:1, February, 1941.

EDITORIAL COMMENT

WELL SPENT YEARS

In the death of Dr. Charles Bernstein the State of New York has suffered the loss of one of its most original and vigorous-minded public servants. The Rome State School has been Bernstein for 40 years. When he became connected with it the institution was known as the New York Asylum for Unteachable Idiots. It was a field that appeared to offer no prospect to an ambitious young man for a career. Undaunted by the dreary outlook, he accepted an appointment as assistant physician at the age of 22 in 1895. For seven years he served an apprenticeship under Dr. John F. Fitzgerald, gaining knowledge of mental deficiency and no doubt gaining ideas and forming plans which were later to be put into effect. In 1902, he was appointed acting superintendent, and it was about a year later that he received his appointment as superintendent after civil service requirements had been complied with.

Bernstein was a man who had no respect for tradition. The suggestion, "It has always been done this way," was to him only a challenge to try something better, originality being one of his notable traits. He repudiated the idea that his patients were unteachable. He knew better, for he himself taught them to be useful in many simple ways. An abounding optimism made him confident that the old asylum for the unteachable could be made into a modern school for backward and retarded children. He organized a plan of instruction, formed classes, employed teachers and himself, in the beginning, carried on a large share of these duties. He taught the boys to care for livestock and perform the ordinary duties of a farmer. He taught the girls to sew and mend, to cook, to wait upon others and to do housework. When the institution became crowded, he did not wait for the legislature to appropriate money for new building and for the slow procedure of perfecting plans, securing contracts and erecting great buildings. His optimism made him too impatient. What he did was to go into the country not far away and rent a farm which was equipped with commodious buildings. He employed a man and his wife as manager and matron, both of whom had had experience under his direction, and placed them in charge. Ten or 12 of his best trained young men were established in the farmhouse, being paid a stipend from the products of the farm which provided their clothing and spending money. When the neighboring farmers saw the excellent work these young men were doing, their industrious habits and general trustworthiness, they were anxious to hire one or more of them.

This, Dr. Bernstein was willing to allow, but he took care that the wages fixed were satisfactory and that they were paid to him at stated periods; and for each boy he opened an account in the local savings bank in his name and that of the boy. It was not long before the colony was self-supporting and others were established. Colonies and houses for girls were established in mill towns; and the girls found employment, not only in the mills, but also in the homes of citizens.

The experiment received the cordial support of the communities. There were at times more positions offered than could be filled. The prospect of going out into the world again proved an incentive to the patients in the institution who entered with interest into the training classes; and the whole morale of the school was lifted.

Dr. Bernstein had little patience with red tape. He was charged, at times, with having overstepped the authority vested in him as the superintendent of an institution by the State laws. Such comments only amused him. He knew that his ideas were sound, that he had the whole-hearted support of his Board of Managers and humanitarians generally, and he knew that an investigation would result in nothing but approval and prestige; and so the colony plan of renting homes, paying rentals out of the earnings of the inmates, along with the plan of the individual savings bank accounts, went on without interference until the State schools were incorporated into the Department of Mental Hygiene, and he was required to conform to the routine practices which resulted in considerable curtailment of his authority and initiative—without, be it said, curtailment of his devotion and enthusiasm.

It is not unnatural for colleagues in such work as psychiatry to wonder where, in Charles Bernstein's history were laid the foundations for his choice of career and his extraordinary success in it. His father, an immigrant from Germany, proprietor of a country store in Carlisle, N. Y., died when Charles was four. His mother, of German stock which included an ancestor in the Revolutionary Army, died when he was nine. The village doctor befriended the lonely boy, who had been left under the guardianship of a stern maternal uncle; it was the doctor who took him to Albany for hospitalization for a stubborn skin disease; it was the doctor who took him later from his uncle's to live as a helper at his own home; and it was at the doctor's home that Charles first felt attracted to medicine and made his resolve to go through medical school with the small inheritance his father had left for his education. Perhaps the admiration of a small boy for his benefactor and the kindliness of the physician toward an orphan found their reflection later in a youth's choice of medicine as a profession and in his practice of that profession in kindly aid to thousands of children who had vir-

tually no parentage. It should be said that, in the rôle of foster parent, he had the inestimable assistance of Mrs. Bernstein. He was married to Miss Lillian Stebbins in 1905; and for the 30 years before her death, she devoted herself as selflessly as did her husband to the interests of the school's children, for they had no children of their own.

The influence of such a man as Dr. Bernstein could not be confined to a single institution. Others in this State and far beyond its boundaries have recognized their debt to and adopted the methods of this pioneer superintendent at Rome. And, as former Commissioner Frederick W. Parsons, M. D., once observed, "the Bernstein Colony Plan is known abroad . . . he will be known as one who has instituted social reform for the benefit of a considerable percentage of the population, and . . . posterity will place his name with those whose labors have been distinguished in this field." Charles Bernstein served his medical specialty, his profession in general and the city of his home as loyally as he served the institution he headed. He had been president of the Oneida County Medical Society and president of the American Association for the Study of the Feebleminded, he was a member of the American Psychiatric Association, the American Neurological Association and other usual medical societies. He was associate editor of THE PSYCHIATRIC QUARTERLY from 1927 to 1935. He lectured at Syracuse University and Albany Medical School and organized and directed summer schools and clinics for instruction of public school teachers and welfare workers in mental testing. He wrote for numerous psychiatric and sociological publications. In his home city, he was active in fraternal order and service club circles, served as a savings bank trustee and as trustee of the Rome Baptist Church. That the community of which he was a citizen will miss him as greatly as the State of which he was a servant is testimony to the fullest of this extraordinary man's active and useful life. The records of few are filled with such well spent years.

KEEPING THEM OUT IS AS IMPORTANT AS GETTING THEM OUT

If psychiatry is to meet today's unprecedented demands, it will be as important to keep patients out of our mental hospitals as to get them out. It may be well to summarize briefly certain facts which have been of concern for many months to everybody from the directors of department policy to junior participants in staff meetings.

The burden on psychiatry in the national emergency was heavy enough before Pearl Harbor. Today, it is being doubled and redoubled; and the public mental hospitals are carrying the greater part. Some New York

State hospitals have lost or soon will lose from a fourth to a third of their medical staffs to the armed services; and the proportions are likely to be increased as age limits are raised—and perhaps as women psychiatrists are summoned. In a typical institution before the first reserve officers were called to active duty, there was one physician to every 155 or 160 patients on the books. This particular hospital now has, or soon will have, only one physician to every 225 or 230. On its depleted staff, are falling increased demands for volunteer service with draft boards, with civilian defense units, with various organizations for building and maintaining morale; and these demands will continue to rise.

Volunteering and the draft have struck hard into the ranks of the non-medical hospital employees, graduate nurses, clerical workers, attendants and technicians; and small emergency increases in pay have failed to check the exodus of the members of the low-paid groups to war industries. It has long been obvious that emergency medical and surgical services were suffering; that opportunities for psychotherapeutic treatment, never ideal, were being steadily reduced; that research was being seriously hampered; that already overburdened administrative officials faced probable emergency ward duty; and that the physical and psychic strain on the individual psychiatrist was being notably increased.

This, in brief, is the current problem, the main outlines of which have long been obvious. The solution—if any is possible—has long been obvious, too. It is the conclusion reached by virtually all who have been considering the question, that is that the burden must be materially reduced if the hospital systems are not to regress to the status of mere custodial asylums. Greater efforts must be made than ever before in the past to reduce not only the actual numbers of persons now in public mental institutions, but the current rate of increase in hospital population.

We may expect to see much greater use of insulin, metrazol and electric convulsive treatment in the near future in an effort to get out of the hospitals patients now in them. There will be increased numbers in family care, efforts to grant earlier paroles.

But the equally important matter of keeping out of the hospitals mental patients who have not yet been admitted has received less attention than it has deserved. It is a matter in which hospital staffs, social agencies, the general public and governmental organizations from local to national should be called upon to cooperate.

For example, our military authorities—if the army can be persuaded that psychiatry is not a quaint survival of witch-doctoring—could be of the greatest assistance in this connection. A current news magazine makes the following report on military psychiatry:

"At induction stations, every Army recruit spends from three to six minutes with a psychiatrist at the end of his physical examination. In this short interview the eagle-eyed specialist has to spot signs of mental disorders, whether serious or merely neurotic." (The headline accompanying this masterly summary is "Ever Had a Fit?" It seems appropriate.)

The seriousness of this situation from the public mental hospital point of view is, of course, that such examinations cannot detect more than the most obvious disorders and that thousands of mentally ill men who previously adjusted well in their communities to their handicaps will be returned from brief military service with breakdowns necessitating hospitalization. The American Psychiatric Association is making every effort as a body to remedy this situation; and the individual practitioner can do no more than add his voice to the weight of this official representation. Keeping unstable men out of the army will keep many of them out of mental hospitals.

Where the individual psychiatrist can do more is in meeting the day to day problem of new admissions. It is too well-known for discussion that much of the increase of recent years in mental hospital populations has been from the older age groups of an older population. What is less often stressed is that in the rural society of a century ago, arteriosclerotics and senile psychotics could often remain and be cared for at home—on the farm—an impossibility in many modern town homes or city apartments. But family care for such patients is a modern possibility. Old age pensions will meet the costs for many; relatives can afford moderate charges for others. Cooperation among staff physicians, committing agencies, social welfare groups, relatives and State officials could avert hospitalization completely for many of the arteriosclerotic and senile psychotic.

Dr. Walter A. Thompson of Rockland State Hospital, writing in the April, 1942, issue of this QUARTERLY in an article to which the attention of readers is again commended, notes the lack of necessity for commitment of many "harmless persons such as some hebephrenic dementia præcox patients," of many paretics "without secondary symptoms," and of others. Every psychiatrist who has served on an admission ward can make up his own list. There is the psychoneurotic voluntary patient, for instance, to whom treatment certainly cannot be refused but who often would do as well with, and who perhaps would receive more and better-planned psychotherapy from, a mental hygiene clinic than on a hospital open ward.

There is the question, too, of keeping out of the hospital the parole patient once he is paroled. There is the patient who has had freedom of the grounds for months and years and who could have had parole if he had had the initiative to find a job. It is perhaps worth greater effort today than before to find for him the job for which his own initiative is lacking and to risk his ability to hold it under moderate supervision.

All these steps mean lessening the hospital burden at the expense of already overtaxed social service and clinic. They mean, for all practical purposes, reducing still further the numbers of psychiatrists available for ward service by increasing those on clinic duty. Furthermore—although greater use of family care, earlier parole and increased clinic activity are desirable aims for the future—the efforts urged here can hardly represent permanent progress, even if completely successful in meeting the emergency. While the war lasts and the demands on the medical profession increase, it is idle to hope for advances in ward service, in the increased availability of psychotherapeutic treatment or in the expansion of research.

If some part of what may be achieved with family care, parole and clinic may some day be counted as a gain, it is so much the better. But the aim now must necessarily be less in the direction of progress than in seeing that we do not lose the advances of the last half century in the unprecedented crisis of today. And keeping out of our mental hospitals patients who can be cared for outside is as practical a way as any now open to us to see that the extraordinary burden of today does not destroy past gains.

———o———

THE QUARTERLY IS REDUCED IN SIZE

With this issue, THE PSYCHIATRIC QUARTERLY begins to show the effects which the war is producing on all civil activities. Because of the paper shortage, the editorial board feels that it is now necessary and will continue to be necessary to reduce the number of pages in each issue. Readers may expect 35 or 40 fewer pages—perhaps still fewer—of scientific articles in each issue than the 190 pages which formed the average content during 1940 and 1941. The high grade of paper formerly used for half-tone illustrations promises no longer to be available. Future issues may see the paper on which the text is printed also reduced in quality.

Other publications in the psychiatric field are feeling the same strain. Some American periodicals have reduced number of pages, format, quality of paper, or size of type, or have retrenched in more than one of these respects. British psychiatric publications have shown the effects for nearly three years. Page numbers have been reduced drastically. Two issues have sometimes appeared as one. The forecast now is that the paper shortage will soon have results on scientific publications in parts of the world as remote from present actual conflict as Latin America.

Under the circumstances, the present difficulties of THE QUARTERLY are comparatively minor. We may expect them to increase. Members of the editorial board are in or soon will be in the armed services. Demands

on those remaining are steadily rising. For months past, the editorial work of THE QUARTERLY has demanded increasing sacrifices of time and energy on the part of the associate editors. That up to the present there has been no reduction in quality of scientific articles presented or in standards of editing has been made possible not only by the devoted work of these editorial board members but by the generous assistance of volunteer helpers in reading manuscripts and in aiding in other editorial tasks. It is their due to express thanks here for the valuable help given in recent months by Nolan D. C. Lewis, M. D., director of the New York State Psychiatric Institute and Hospital; by Zygmunt A. Piotrowski, Ph.D., of Columbia University and the New York State Psychiatric Institute and Hospital; by Prof. Eugene Bewkes of Colgate University; by Prof. John Mattingly of Hamilton College; and by George L. Warner, M. D., Clarence L. Russell, M. D., Anna J. Gosline, M. D., Oswald J. McKendree, M. D., and Werner Hamburger, M. D., all of the Utica State Hospital medical staff. There are others to whom it would be equally fitting to express gratitude, including those responsible for the mechanics of typography and press work, in which we believe there has been steady and consistent improvement despite increasing demands on personnel and equipment.

It is realized that the difficulties here outlined have only begun. That means will be found to continue to meet them, without sacrifice of quality of content or of editorial work, is both the hope and belief of THE QUARTERLY'S editorial staff.

BOOK REVIEWS

Twelve Decisive Battles of the Mind. By GORHAM MUNSON. 280 pages. Cloth. Greystone Press. New York. 1942. Price $3.50.

A good deal has been seen in print recently on the subject of morale and propaganda. "Twelve Decisive Battles of the Mind" is an historical narrative of 12 critical events which influenced the course of world history. In each of them, the employment of propaganda was an important influence in determining the result. The author is quite clear as to the origin of the term and the purpose for which it was coined. In 1622, Pope Gregory XV created the *Sacra Congregatio de Propaganda Fide*. It was to be a central office to direct and administer the expansion of the church in the New World. Urban VIII who succeeded to the papacy and who, by the way, was the pope who approved the condemnation of Galileo, instituted the College of Propaganda to prepare missionary priests for their duties. The Latin word *propago* which means to extend, to increase, to carry forward, to enlarge, has assumed, in recent times, a different significance from what was first its accepted definition. We now recognize others as propagandists than the zealous priests and Protestant missionaries who faced extreme hardships and dangers, even martyrdom, for what they believed to be the true faith in the seventeenth century.

The author offers a definition of the term: "Propaganda is the art and science of controlling the mind of mankind by overwhelming insistence upon a point of view." In its modern form and meaning, propaganda is a product of Germany. Benjamin Kidd, the English philosopher, noted that within two generations Germany under Bismarck had completely changed its national character. Likewise he observed that Japan, within two generations, had changed from a feudal, almost barbarous country, into a modern power on a par with the European nations. He wrote: "So far from civilization being practically unchangeable or only changeable through influences operating slowly over long periods of time, the world can be changed in a brief space of time. Within the life of a single generation it can be made to undergo changes so profound, so revolutionary, so permanent, that it would almost appear as if human nature itself had been completely altered in the interval." Propaganda is a program definitely planned, the purpose being to overcome the resistence and inertia of the individual and the masses, to win them over to a new point of view. It employs half-truths and falsehoods. It plays upon the generous impulses of men or on their brutal instincts. It misinterprets the motives and purposes of its opponents.

It plays upon prejudice, racial antagonism, greed and hatred. It makes use of the spoken and whispered word, of the printed sheet and page; and now that the radio is so generally in use, larger audiences may be reached and influenced. Where contrary views and open debate are suppressed, great progress is easily accomplished.

Coming down to modern times, the outstanding example of the power of propaganda is "Uncle Tom's Cabin," the book which unquestionably precipitated the American Civil War which caused more than a million deaths, directly and indirectly, over a period of four years and ended with a condition of poverty among the Southern people which was not overcome for nearly 50 years. Harriet Beecher Stowe was the sister of Henry Ward Beecher, whose biography was reviewed in THE QUARTERLY in a recent number; and she shared with him his talent for exhortation and emotional frenzy. Though she wrote a novel of the domestic life of the South, there is no reason to believe that she was ever nearer to a southern state than Cincinnati, except for one short visit across the river to a plantation in Kentucky. That Harriet Beecher Stowe shared her brother's psychopathic traits is suggested by the circumstance of the "visions" to which she was subject. Such a vision, which came to her at the First Parish Church in Brunswick, Maine, in 1851, portrayed the death of Uncle Tom very much as it appears in her book. Upon returning home, she wrote the scene as she had imagined it in church and read it to her children. It affected them to tears. This was her inspiration. This was the first chapter written for the book, the remainder being built up around it. The work which followed is made up of a series of vivid word pictures which makes appeal to the emotions only. The author says: "Analyze 'Uncle Tom's Cabin' and you will find that Mrs. Stowe is less inventive than most novelists . . . She was not inventive but she was a powerful colorist of her information . . . . Her coloration, her whitening the characters of Eva and Tom, her blackening of Haley and Legree, her Christian sermonizing, her indulgence in visions during the narrative, were all directed towards the reader's emotions and emotions dominate the intellect . . . . Mrs. Stowe did not work as a literary artist. Her sense of form was crude, 'Uncle Tom's Cabin' being a piece of propaganda designed to make the reader angry at slavery . . . Eliminate the crude impossibilities from 'Uncle Tom's Cabin' and you have only a bad novel. It is the impossibilities that made it good propaganda. Hitler knows very well the craving of men for the fabulous. Mrs. Stowe, uncynically, knew this too." The book had an extraordinary, even phenomenal, success. The first edition of 5,000 copies was sold out in two days. At the end of the first year, 305,000 copies had been sold with the demand unabated. It has been translated into 19 languages. The manuscript, inci-

dentally, had been sold, sight unseen, for serial publication for $300; and it was left to John P. Jewitt, a small publisher, to bring it out in book form after a larger firm had declined.

The most striking characteristic of the propaganda emanating from the Nazi party is that no consideration of justice, truth or honesty is permitted to interfere with the carrying forward of the purpose in hand. The only purpose is success, and success must be gained at the sacrifice of every other consideration. Considerations of justice, truth and conscience do not exist for the Nazis. The deliberate manufacture of evidence, even the forging of historical and official documents by the secret police, is approved. An example of this is the employment by the Gestapo of a series of alleged Jewish documents, the "Protocols of the Learned Elders of Zion." These documents have a shady history.

One Sergius Nilus, a Russian, issued, in 1901, a book with the title "The Great and the Little," having to do with the Anti-Christ and the rule of Satan on earth. It contained the "Protocols." This scandalous book was circulated in Russia and translated into German, but in 1917 when Karensky was in power, the volumes were confiscated and the author, Nilus, was imprisoned. In 1934, suit was brought against three antisemitic leaders, based upon the circulation of the protocols. The Supreme Court of South Africa, where the trial took place, decided for the plaintiff and awarded damages, pronouncing "the protocols an impudent forgery, obviously for the purpose of Anti-Jewish propaganda." In 1935, the Swiss Nazi party published the protocols at Bern and five defendants were placed on trial. Upon conviction, the case was appealed and in 1937 the Supreme Court at Bern reaffirmed the lower court, saying in its verdict: "Thus far it is clear that no proof for the authenticity of the protocols has been presented."

A newspaper correspondent, Philip Graves, came across a clue to their origin in a coverless and tattered French volume which contained the greater part of the protocols. The publication date was lacking. Search of the British Museum disclosed a second copy of this very book, dated 1864. It was anonymous and had been published in Brussels. No fewer than 170 passages of this book had been translated into the Russian of Nilus. The author was Maurice Joly, a French lawyer. This book had no relation to the Jews or to a world conspiracy of Jews. It was directed against the Emperor Napoleon III. The author did not dare to criticize openly this dictator. He adopted the device of a dialogue between two political theorists, a dialogue concerning a ruthless dictator. Nilus or someone else had revamped Joly's pamphlet, and had substituted for the latter's characters in the dialogue the Jewish Secret Council. This work had been used in Russia to convince the Czar of the existence of a national Jewish plot.

Somewhat abbreviated the protocols, 24 in number, are printed in the book here reviewed. They cover 66 pages. One may easily see upon reading them how, if they were believed to be true, they would stir up the anger and resentment of the rabble. They gave rise to the pogroms and Jew-baiting in Russia in 1905. It is estimated that no less than 690 massacres of Jews took place in Russia about that time. In 1912, a new edition of the protocols started another wave of pogroms. Another edition in 1917, circulated by the Czarist police, gave rise to still another series of massacres of the Jews in Russia. "They (the protocols) were indispensable to Hitler in his climb to power and since the formation of the Third Reich, they have become one of the main psychological explosives employed in the fulfillment of the Reich's foreign policy . . . More recently the protocols have been reprinted in Father Coughlin's *Social Justice* and cheap reprints are peddled by Fascist groups, of which Pelley's Silver Shirts are typical."

Adolf Hitler is, of course, the outstanding modern exponent of propaganda. After the German defeat in the first World War, Hitler, who was not a scholar, for he had but little formal education and was refused admission to the University of Vienna to study architecture, was obliged to content himself with earning his living by day labor. He was deeply humiliated by the defeat of Germany. He obtained employment as a propaganda officer, giving talks on morale to prepare soldiers for civil life. He formed acquaintances with others like himself, particularly a group from Munich called the German Workers' Party, which had two grievances in common with him: protest against the Versailles Treaty and hatred of the Jews. He became the chief of propaganda, very soon found himself attracting larger and larger audiences, and within a year he was addressing throngs of more than 5,000 people. From his powerful influence with the rabble as well as with the more thoughtful element among the Germans, he became the leader of the party. Arrested and imprisoned after the failure of the Munich *Putsch*, he spent his time in prison in writing, with the aid of Rudolph Hess, the book, "*Mein Kampf.*" So convinced was he of the success of his particular brand of propaganda, of which he had become already a past master, that he said on one occasion that "propaganda could make people believe that Heaven was Hell and wretchedness a paradise."

Hitler employed, in the interest of the Nazi party, all the instrumentality of rabble-rousing which he knew so well how to do—speeches, pageantry, parades, marching songs, as well as newspapers—all stressing a few simple slogans. Hitler believed that the average individual was of limited intelligence, that he was possessed of but short memory and little reasoning power, that slogans and catch phrases hurled at him often enough and insistently enough would be believed and followed. The party grew rapidly under

his leadership. By 1928, 800,000 votes were won and 12 seats in the Reichstag gained; two years later, there were more than six million votes and 107 seats in the Reichstag; in 1932, nearly 14 million votes and 230 representatives in the legislative body. It was in 1933 that Hitler became chancellor and Goebbels assumed the office of propaganda minister.

In addition to the classical examples of propaganda mentioned in detail in the foregoing, Mr. Munson devotes space in his book to others. St. Paul's Epistle to the Romans, he regards as the first historical example of the use of the written word to win over adherence to a new cause. The propaganda of religion has been zealously cultivated since that time.

The influence of the writings of Thomas Paine upon the American Revolution is not stressed in modern school histories; but it was a powerful influence recognized at the time, for he was awarded the sum of $3,000 by act of Congress for his services. Paine was an Englishman who had tried various occupations but without gaining success. He believed he had talent for poetry. He tried newspaper work. He had a taste for science and was of an inventive turn of mind. He became acquainted with Benjamin Franklin who invited him to come to America. He arrived in this country in 1772. Robert Aitken, a Philadelphia bookseller, employed Paine as editor of the Pennsylvania Magazine. There he showed much initiative, crusading for woman's rights, against cruelty to animals, against duelling, and expressing progressive ideas on marriage and divorce. When the agitation over the Stamp Act became a burning issue in America, Paine was all set to plunge into the controversy, something which he did effectively.

Interesting chapters are devoted to the propaganda of revolutionary democracy, dealing with the issues leading up to the French Revolution, and with the propaganda of justice, an historical account of the Dreyfus Case. Captain Dreyfus of the French army general staff was convicted on perjured testimony and committed to life imprisonment on Devil's Island. Several years passed, and the friends of Dreyfus who were satisfied of his innocence had given up hope of any redress.

The novelist, Emile Zola, became interested in a literary group who believed in the innocence of Captain Dreyfus and wrote a letter, with the assistance and approval of his friends, to Felix Faure, President of the French Republic and at the same time published the letter in the French journal, *L'Aurore*. The letter created a sensation. From a circulation of a few thousand, *L'Aurore* leaped to 300,000. The letter is given in full under the title, "*J'Accuse.*" Through the investigation brought about by this sensational letter, the conspiracy which had existed against Captain Dreyfus was exposed. One of the conspirators committed suicide, and others confessed and fled the country. The Devil's Island prisoner was brought

back in triumph to Paris, wholly exonerated and restored to his rank in the army. Zola's letter is probably the most powerful and far-reaching example to be found of propaganda by one man.

President Woodrow Wilson's Fourteen Points, propaganda for peace in the last war, are interestingly treated, as is the propaganda of Bolshevism based upon Lenin's theses and, finally, the propaganda of Fascism, showing the part taken in Italy by Mussolini in his ambitious dream of controlling the Mediterranean Sea.

Most books so far written on the subject of propaganda have treated it from the academic and impersonal point of view. "Twelve Decisive Battles of the Mind" is dynamic in its approach. It is a series of biographies which, taken as a whole offer not only interesting historical perspectives but present them in a thrilling story which holds the reader's attention to the end.

The Rorschach Technique. A Manual for a Projective Method of Personality Diagnosis. By BRUNO KLOPFER, Ph. D. With clinical contributions by Douglas McGlashan Kelley, M. D., Med. Sc. D. Introduction by Nolan D. C. Lewis, M. D. x and 436 pages. With bibliography, index and individual record blank. Cloth. World Book Company. Yonkers-on-Hudson, N. Y. Price $3.60.

The Clinical Application of the Rorschach Test. By RUTH BOCHNER, M. A., and FLORENCE HALPERN, M. A. With an introduction by Karl M. Bowman, M. D. 216 pages with bibliography. Cloth. Grune & Stratton. New York. 1942. Price $3.00.

Psychodiagnostics. A Diagnostic Test Based on Perception. By HERMANN RORSCHACH. Including Rorschach's paper, The Application of the Form Interpretation Test. Translation by Paul Lemkau, M. D., and Bernard Kronenberg, M. D. 226 pages, with bibliography. Cloth. Hans Huber. Bern. 1942. American distributors, Grune & Stratton. New York. Price $5.75.

Psychodiagnostik. 10 cards. Fourth edition. Cloth Binder. 1941. Hans Huber. Bern. Price $4.50.

Whether increasing demands on military psychiatry are responsible may be an open question; but this summer appears to mark an important turning point in development of the Rorschach method for psychiatric use in the United States. Two admirable introductory volumes on the technique have just been published; and the first authorized English translation of Rorschach's *"Psychodiagnostik"* has been brought out by Hans Huber of Bern and is now being distributed here by Grune & Stratton of New York as American representatives.

For the first time, authoritative and readily comprehensible material in this field has become available for the beginner; for, as Dr. Klopfer observes in "The Rorschach Technique," Beck's scholarly "Introduction to the Rorschach Method," "stresses mainly the presentation of case material, assuming that the reader is 'in broad outlines, at least, familiar with the objectives of the Rorschach method.'" Neither Drs. Klopfer and Kelley nor Mrs. Bochner and Mrs. Halpern make that assumption. Dr. Klopfer notes modestly that "this book is hardly a basis for self-training, "but expresses the entirely justified hope "that it will be of considerable help when used in conjunction with other training facilities." The Bochner and Halpern volume has a slightly different orientation. While Dr. Bowman's introduction notes that "the beginner . . . will find the book well suited to his needs," the authors' treatment of their subject is from a somewhat different viewpoint than that of a training manual. Mrs. Bochner and Mrs. Halpern have devoted as much attention to what might be called the presentation of a birdseye view of the Rorschach and its possibilities to the psychiatric profession as they have to the problem of teaching administration to beginners. Drs. Klopfer and Kelley, after presenting a thorough exposition of the problems of administration, have devoted their section on clinical diagnosis to material "of value primarily to the medically trained professional worker or to those readers who have had extensive experience in clinical psychopathological fields."

Dr. Kelley's discussion of clinical findings, prepared during two years of research as Rockefeller Fellow at the New York State Psychiatric Institute and Hospital, is highly technical. It is intended for the expert and will be of use chiefly to the expert, an end deliberately sought by the authors to avert the possibility that inadequately trained workers would attempt to put the Rorschach to clinical use. The criteria of differential diagnosis are discussed thoroughly, but their application is not illustrated. Mrs. Bochner and Mrs. Halpern, on the other hand, illustrate the clinical application of the method by carefully chosen protocols, selected in a fashion to make plain to psychiatrist or student beginner the differences in the records of the commonly encountered mental states. Illustration and discussion of children's protocols, with emphasis on caution in accepting children's interpretations, seem of particular value.

That Mrs. Bochner and Mrs. Halpern do not consider their book complete equipment for administration and interpretation of the Rorschach examination is made plain in Dr. Bowman's introductory warning, "All tests . . . in the hands of the non-expert may do harm." Dr. Klopfer is much more explicit. Dr. Klopfer feels that "Proficiency as a Rorschach administrator can be gained within a few months." To interpret, however, what has been

administered and scored, he warns, requires "a wealth of general psychological experience" and the remaining in "a 'learning stage' for two or three years." (Dr. Zygmunt A. Piotrowski, in his article in this issue of THE PSYCHIATRIC QUARTERLY, puts the period required for thorough acquaintance with the Rorschach at "about two years.")

Both of these new volumes should be important contributions to greater knowledge and use of the Rorschach technique. The Bochner and Halpern work—based on much experience with the Rorschach at Bellevue Psychiatric Hospital—is unquestionably the easier to comprehend for a person wishing merely a general knowledge and understanding of the method; as the authors note, they have endeavored to present their material "in brief and simplified form." They follow, in general, the symbols and scoring methods developed by Dr. Klopfer at the Rorschach Institute, but with modifications, notably in their chiaroscuro scoring, in construction of personality graphs and in summation. It is, of course, testimony to the objectiveness and scientific validity of a method—administration of which is not only an examination but application of an art, and which, as Mrs. Bochner and Mrs. Halpern observe "cannot be scored against a stencil"—that such differences in technique do not prevent essential agreement on findings by all schools of Rorschach workers. The Bellevue workers' book is adequate for instruction of administrators, given at least a little personal supervision; and it gives an extraordinarily clear view of how the records of the various mental states compare.

The Klopfer and Kelley volume is a far more complete training manual for any person who expects to do serious and continued work with the Rorschach. It covers the ground so comprehensively and so minutely that, despite Dr. Klopfer's expressed doubts, it might almost seem possible for a psychologist, by earnest study of the book and the cards to learn administration and scoring without personal instruction. The refined scoring system developed at the Rorschach Institute and through publication of the "Rorschach Research Exchange" is carefully and clearly explained, a protocol of a normal subject is presented in full, the standard "Individual Record Blank" printed for the Rorschach Institute is shown in facsimile, and the "location chart" with its gray, lithographed reproductions of the cards is reproduced and its use demonstrated. A bibliography of the Rorschach method through January, 1942, is included in the volume, and there is an excellent index.

The Bochner and Halpern volume also has an excellent bibliography, though a far less complete one; and it contains a useful table of reciprocals for calculating percentages of replies in any record of ordinary range.

Regrettably, there is no index; and a specimen scoring chart and at least outline representations of the cards would have been desirable additions.

Keeping in mind the somewhat different orientations of these two introductory books, either of them can be recommended without reservation as a better introduction to the study, practice and general evaluation of the Rorschach technique than has heretofore been available. The fact that a set of the cards is essential for serious study or comprehension of the Rorschach by use of either textbook is a matter which may not be entirely obvious to persons lacking any acquaintance whatever with the method.

Hermann Rorschach published his original work "*Psychodiagnostik*" ("Psychodiagnostics") in 1921. The following year, his further important contribution on the subject was published by his friend and colleague, Emil Oberholzer, the psychoanalyst, shortly after Rorschach's own untimely death. This extraordinary "blind" Rorschach diagnosis of one of Oberholzer's analysands is included in the present English translation of the "*Psychodiagnostik*" under the title of "The Application of the Form Interpretation Test." ("To Psychoanalysis" might well have been added.)

Despite a voluminous and still rapidly growing literature compiled by a large number of able and enthusiastic scientific workers in the past two decades, the original research of Rorschach remains by far the most important single contribution ever made to the understanding and application of the diagnostic method he devised—as fundamental to its theory and practice as the "Interpretation of Dreams" and the "Introductory Lectures" are to psychoanalysis. The translation by Drs. Lemkau and Kronenberg is the first authorized one and the first to be made generally available in English to students and Rorschach workers. For understanding of the development of the method, of the dynamic psychology involved in its operation, of the underlying concepts which account for its empiric validity, this work of the originator would still appear to be essential.

Rorschach, in the "Psychodiagnostics," set forth explicitly the conditions for conducting and interpreting his test; but his book is less a manual of instructions than a careful report of the astonishing results of an experiment; and the volume could not well be used for modern training, in view of the advances in application of the method which have taken place since Rorschach's death. What Rorschach reported and what the work here translated concerns is the application and theory of a procedure which must have seemed to many of his colleagues—as it does to many present-day psychiatrists—too absurdly simple for serious attention, let alone scientific usage.

One may observe in Rorschach's text his extensive knowledge of psychoanalysis and his application of psychoanalytic principles in developing the theory of his inkblot method. Before he published "*Psychodiagnostik*,"

he had studied results of the test as applied to patients before, during and after analysis. Here is a dynamic background for the method which is nowhere made clearer than in Rorschach's own writings and which is, perhaps, not sufficiently appreciated. It may be interesting to speculate whether it was not his psychoanalytic understanding which gave to Rorschach sufficient confidence to make public the results of his seemingly simple test. The publication is evidence of possession of insight which might justly be termed genius. It should not be overlooked that Rorschach, despite his youth—he was 37 when he died—was a psychiatrist of commanding reputation in Switzerland at the time he published his researches; and he must have known that he staked his repute on their scientific validity.

The present long-overdue translation seems admirable. The volume includes a brief biographical sketch of the author and the introduction to the second German edition, both written by the editor, W. Morgenthaler, M. D. Typographical errors are comparatively few, considering that the volume was set by German-speaking compositors; and those undetected in this will doubtless be remedied in future editions. The original symbols of Rorschach are translated into generally used English forms. Both students and clinical workers will be interested to note that *Erlebnistyp*, which has given trouble to most translators, is rendered here as "experience type." The volume is eminently satisfactory and well calculated to take its place as a necessary part of every Rorschach worker's professional library.

The translation will also perhaps bring home for the first time, to students and workers who are not familiar with German, Rorschach's repeated emphasis on the need for parallel series of figures to the plates used in "Psychodiagnostics" and all succeeding Rorschach work. Rorschach himself doubtless would have published such a series had he lived. It may or may not be coincidence that publication of the translation of Rorschach's original work comes shortly after publication, also by Hans Huber, of "*Einfuerung in den Behn-Rorschach-Test*" by Hans Zulliger. This is the long-awaited test of 10 parallel plates which differ from the original and may be used for control purposes. The German text, 232 pages, is priced at $3.80, the new Zulliger plates at $3.75; the American distributors are Grune & Stratton. There is no announcement of an English translation.

The Rorschach plates were originally issued as a supplement to the "*Psychodiagnostik*," and Rorschach called attention to this in the opening paragraphs. His introductory remarks stand unchanged in the translation, although the plates are now sold separately, as they have been for years. They are now priced at $4.50, due to "very high war risk and marine insurance," as well as to customs duties.

Modern Clinical Psychiatry. Second Edition. By ARTHUR P. NOYES, M. D. 570 pages. Cloth. W. B. Saunders Company. Philadelphia and London. 1939. Price $5.00.

Here is presented a scholarly, palatable and practical textbook of psychiatry. It is another evolved out of a course of lectures—one may believe that these are dynamic.

Three quotations will serve to point the author's objectives:

"Psychiatry has therefore become increasingly concerned with inabilities, emotional or other, of the personality that interfere with adequate adaptation of the individual either at the social or at the physiological level. For this reason, an effort has been made not to deal merely with the obvious manifestations of major neuroses and psychoses but also to articulate psychiatry both with personality reactions observed in the everyday social contacts of life and with the reactions of the organism which although appearing on the surface to be purely somatic nevertheless contain significant mental factors or aspects . . .

"If at times this genetic-dynamic, psychopathological aspect of the organism's reactions seems greatly stressed it is because it is so important not only for psychiatry but for general medicine, in which the physician meets daily with clinical states, complicated if not created, by the patient's attempts to deal with personality problems and maladjustments. . . .

"For the present it seems most fruitful to look upon most mental disorders not as the result or expression of some 'disease' but as a failure to meet the test of life, as a mode of behavior or of living that is the logical, although socially maladjusted, outcome of the particular individual's original endowment, of the molding influences of the home, of his special traits of personality, of the habits he has formed, of the stresses and problems springing perhaps from deep within his emotional and instinctive life, of his ability to meet these strains, and of any bodily ailments that may impair the integrity or efficiency of his biological organism."

Dr. Noyes meets the primary problem of all textbook writers—the student or general practitioner must here delve through 165 pages of preparatory concepts and methodology before he bites into the meat of the psychoses. It can be said however that the introductory material is requisite and interestingly written. There follows a systematic description of the principal entities with a generous statement of therapy in each instance. To this reviewer the sections on schizophrenia, on the management of the senile psychoses, alcoholic psychoses, epilepsy and drug psychoses, on the treatment of depressive manics, and on the unconscious, seem excel-

lent. As an instance of the author's pungent style one may cite the following with respect to dementia : "An affective desiccation often deprives the personality of its resonance."

The differential diagnosis of senile from arteriosclerotic, the traumatic psychosis from traumatic neurosis, and that of the mixed manic reaction cannot be unqualifiedly commended. The reviewer agrees with the writer's disagreement with the official classification of the involutional psychoses in the "organic" group. For "others" on page 36 he would have written "another" or named the Kansan. The author's precise definition of negativism, his preference for "affectogenic" over psychogenic, and his exploding of the hoary, mathematical classification of mixed manic-depressive reactions all seem apt. Again, on the negative side one lists his contentions: That psychoneuroses merge into schizophrenia, that child guidance methods prevent the development of schizophrenia, that adrenalin is generally used in shock therapy, that (in view of certain careful studies) . . . "A considerable number of persons who consume large amounts of alcohol over a prolonged period ultimately suffer a certain disintegration of personality, the change ranging from an impairment of emotional stability and control to a noticeable dementia." Curiously, the Argyll Robertson pupil is not defined, foster family care is neglected, and the Rorschach method receives cavalier treatment. Probably in his next edition Doctor Noyes will modify his attitude toward the therapeutic use of the special school class, in view of the current swing of opinion. The reviewer applauds his statement, anent the ever-green controversy of alleged "constitutional psychopathic inferiority." "There is reason to believe that the characteristic patterns of the psychopath become permanently fixed at an early age but it does not necessarily follow that these are constitutionally innate."

A very few annoying typographical errors, and verbs of uncorrected tense referring to other sections are noted. The index seems comprehensive.

Dr. Noyes has written an authoritative text, to be recommended highly for its vivid presentation from a completely psychobiological viewpoint, of a dynamic subject.

Masochism in Modern Man. By THEODOR REIK. 439 pages. Cloth. Farrare & Rinehart, Inc. New York. 1941. Price $4.00.

Theodor Reik has been well known as a disciple of Freud; and for years he associated with him rather intimately. For upwards of 30 years, they were in close contact; and much of Reik's earlier work was supervised by Freud. His writings will, therefore, be looked upon as reflecting, to an unusual degree, the theories and opinions of his teacher. He sees wide implications of psychoanalysis in the interpretation not only of individual con-

duct and conviction but also of that of groups. He sees as the masochist the peacemaker, the benevolent individual. He recognizes this motive in the groups organized to oppose violence, the conscientious objector and other devotees. In later years, Reik has gone along more individual lines of his own formulation.

The book is made up of eight parts. He begins by stating quite clearly Freud's views on the subject of masochism. With reference to the latter's theories regarding the genesis of masochism, Reik feels that they are inadequate, that they fail to reach the mark but are aimed in the right direction. Working upon the basis of Freud's formulations, he believes that he can carry the solution of the problem a few steps further. He states his own attempt at a solution of the problem of masochism has been made possible only by the fundamental work done by Freud; and though he must differ and must criticize his master, he does so with deference. "Where greatness is concerned one has not only the right but the duty to use the severest scale. In this sense criticism will be unrelenting as is due to a genius and only to him. . . . Without Freud's methods and the results he obtained this work (of his own) would have been as impossible as the building of a house for which no bricks were available."

Proceeding in this cautious manner, he develops the subject of masochism in all of its aspects, bringing in his own theories, the development of which should be left to the reader of Reik's book. Its study is recommended to all who are interested in psychoanalytic theory and practice. It is a scholarly presentation of the subject and the most elaborate, perhaps, to be found in English.

Psychology Through Yiddish Literature. *Apologia Pro Vita Yiddicia.* By A. A. Roback. 98 pages including index. Sci-Art Publishers. Cambridge, Mass. 1942. Price $1.00. Edition limited to 350 copies for sale.

This small book appears to owe its existence to adverse reviews of the author's "Story of Yiddish Literature." The present volume is nothing more than a series of rebuttals to the aforementioned reviews. Its potential interest for psychiatrists might lie in the fact that Dr. Roback is a well-known academic psychologist; or in that one of his previous critics (who, incidentally, is taken to task rather severely) is a psychiatrist. Neither of these reasons, however, is in itself very cogent. The title (although not the sub-title) is definitely misleading, since Roback seems to be more concerned with defending his position as a bibliographer of Yiddish than with presenting psychological facts or theories. This reviewer sympathizes with the author's literary point of view but finds nothing in this book of particular interest to the professional psychiatrist.

Psychorama. A Mental Outlook and Analysis. By A. A. Roback. 365 pages including index. Cloth. Sci-Art Publishers. Cambridge, Mass. 1942. Price $2.90.

Dr. Roback's penchant for condensation (witness his "Personalysis Chart") accounts for the neologistic title of this book. "Psychorama" seems to imply a "panorama of the psyche," and this implication is further substantiated by the lack of continuity in the sections or chapters. The book is a collection of journalistic articles written during the past five years or so, mostly for Jewish periodicals. Unfortunately, Roback's insight into that fact cannot alter it. The title may "make provision for the medley which is contained between these two covers" (p. 15); it is hardly a *raison d'être*. Dr. Roback writes so well that one is reluctant to believe that he has succumbed to an ailment so common to amateur writers: the inability to concede ephemerality to a brain child.

The book is divided into five sections: Issues; Books; Men; Events; and Grins and Groans. Most of the "Issues" concern various aspects of Jewish relationships in the western world. The section on "Books" is made up of two book reviews: one of Freud's "Moses and Monotheism" and the other of a book on Jewish Townsmen Societies. The articles on "Men" are obituaries. And the "Events" refer to rather flagrant examples of injustice in totalitarian countries. "Grins and Groans" is a highly sarcastic indictment of Nazi stupidities which, but for their tragedy, might well be funny.

"Psychorama" fails to develop the important quality of universality of interest. A newspaper article written in 1938 tends to be "cold potatoes" today even when revised and dressed in the dignity of book covers. The book's tendency to sectarianism is in itself not a fault, since thinking people recognize, in the light of the still raging holocaust, that the problem of Judaism is also the problem of Christianity. But there is a sin of omission in the absence of a discussion of the deeper psychological aspects of the problem. The advertising blurb announcing the fact that one-seventh of the book is given over to Freud and Jung seems intentionally misleading. Epistolary polemics engaged in with Jung about racial superiorities and a book review of Freud's last publication hardly suffice to give this volume specific psychiatric importance.

Roback's style is unique in that there is a constant bombardment of puns, clichés, and condensation, so that one finds "Psychorama" easy reading, but the author contributes nothing to what his readers already know about his psychological viewpoint. The psychiatrist may well while away an afternoon or two with this book; that his psychiatric knowledge will be greatly augmented thereby is doubtful.

America's Last King. An Interpretation of the Madness of George III. By MANFRED S. GUTTMACHER, M. D. 426 pages, with 19 illustrations, appendix, bibliography and index. Cloth. Charles Scribner's Sons. New York. 1941. Price $3.50.

Farmer George, whose rigid righteousness cost England the allegiance of the 13 colonies, was one of history's many mad monarchs, a fact seldom emphasized in studies of the causes and course of the American Revolution. It is true that he had had a mixed manic-depressive attack in 1765, but the nature of his illness was carefully concealed from his contemporaries; mention that he had been ill at all was deleted after printing had begun from the fifth volume of Smollett's "Complete History of England," which was published in that year; and the fact that the King had had an attack of mental disorder at so early a period became generally known only after his death, 55 years later, when the part his personality had played in precipitating the revolt of the colonies was no longer a matter of intense public interest. It is true also that George III's psychosis cannot be held responsible for the revolution, for he was mentally stable during the years in which the British government was shaping the policies which brought on the struggle; and he was not psychotic during the war itself or immediately after it, although signs of a transitory disturbance were manifest at one time in 1783. It is rather an ironic aside in the life of the afflicted King that not his own instability but that of the great Lord Chatham, the older William Pitt, might be held to have caused the loss of the colonies—for Chatham, a manic-depressive, suffered a deep depression from 1767 to 1769, incapacitating the ablest and most powerful English friend of America, and leaving the government to men whose stupidities actually caused the conflict.

But it is not reading more into the record than may fairly be inferred to conclude that the same rigidity of George III's character which made the American Revolution inevitable also precipitated his five clearly recognizable psychotic episodes. The same inexorable super-ego brought catastrophe upon the empire and the King himself. Dr. Guttmacher has written an important chronicle of the central figure in these imperial and personal disasters. It is a studiously compiled, voluminously documented and vividly written case history. It was written after an extraordinary amount of research in this country and England, where the author had access to the original letters of George III, as well as to other unpublished material. Data on the King's illnesses were carefully kept, observations were detailed

and in great volume, for the condition of the royal mind was necessarily of the greatest concern to the state. In the eighteenth century, an English king might rule, as well as reign; and the mental capacity to rule of George III was a matter of tremendous moment to both public and Parliament, from the time the nature of his disease was generally recognized during his second attack in 1788 and 1789. The records of the family history, personal life and mental illness of this man who died over a century ago are, in fact, more complete than could possibly be obtained for the average mental patient of the present day. He was attended by numerous specialists in mental disorder who observed minutely and made copious notes of their observations; he himself wrote volumes of letters; and a vast amount of material is available, in the many diaries of the day, of fact and gossip concerning the illness of the King.

Dr. Guttmacher finds it of interest to point out that the King's psychiatrists—in a day before the word had come into use—employed a treatment "in essentials much the same as it would be today" for a manic-depressive patient. It is true that they gave quantities of emetics and purgatives and blistered his head and legs; it is perhaps true that they resorted to mechanical restraint, the "straight-waistcoat" and the "restraint chair," more frequently than would be the case today; and it is certainly true that they violated today's canons of treatment by the use of restraint as punishment. But on the whole—in isolating the patient from the emotional turmoil of his family, in attempting to regulate his sleep and his diet, in trying to keep him occupied, in encouraging him with simple psychotherapy—George's physicians followed essentially modern methods. Modern sedatives, of course, were not available, and the eighteenth century specialists used opium to quiet the King. Most of his physicians apparently failed to see the value of hydrotherapy, which appears to have benefited the King highly, and in some cases the royal patient had to ask for this treatment himself.

This enlightened management of the mad monarch's affairs is rather an astonishing and a depressing contrast to the treatment of the ordinary psychotic of his age. When a young woman with paranoid dementia praecox attempted to assassinate the King in 1786 and was found insane, she was sent to Bedlam, where, Dr. Guttmacher notes, she remained for 40 years and "formed one of the chief exhibits for the pleasure-seekers who went there." It is not without interest, too, to note that although the realm was searched for the most eminent mental specialists to treat the King, not a man of them

left a mark of import on psychiatric history—perhaps because progress in the treatment of the affective disorders has been unaccompanied by sensational developments in research or method.

Dr. Guttmacher considers George III a victim of "neuropathic tainting" and cites neurotics, psychopaths, psychotics and mental defectives among his close relatives and descendants; but he remarks that his "mental heredity . . . is not much worse than most of ours," and he observes that not only his "birthright" but "his way of life" produced his mental disorder. George's "way of life," that is, his early environment as the son of a disowned prince, the ruthlessness of his training for kingship, the formation of a cruel and completely inflexible super-ego, the years of tutelage by a man whom he learned to worship and whom the kingdom learned to detest as a foreign lover of George's mother, the complete frustration of his plans to choose his own wife and his later strictly monogamous marriage to a homely little princess for whom he could have felt no affection at the beginning—this is part of a record which would seem, to many, adequate to account for the King's psychosis, without bringing in the debatable question of heredity.

As Dr. Guttmacher observes, George III was a man of "real ability, a conscientious and forceful ruler, with a high moral character and an incredible knowledge of the details of government. His faults were exaggerated virtues." Those exaggerated virtues, the impossible standards set in the unconscious for the conduct of a king, broke George's empire and his psychic stability. Except for his first illness his major attacks were predominantly manic in symptomatology. An interesting feature is that, unlike the classic manic case, his final attack lasted for 10 years without remission. Since its outbreak came at the age of 72, it is perhaps permissible to speculate that an irreversible organic process of the senium had set in and that the symptoms of functional disorder became imperceptibly those of senile dementia.

Dr. Guttmacher notes that his book is the first written in English by a psychiatrist about a psychotic ruler. It is much more, however, than a psychiatric document; it is an important contribution to the history of a world figure and his time, with special interest attached to the American Revolution and the problem of the King's mental disturbances. It can be read with profit by the layman as well as by the professional. The documentation of the volume is exceptional, the index excellent and the format admirable. Dr. Guttmacher uses uniformly such terms as "sane," "insane" and "insanity," whether in observance of eighteenth century terminology or in concession to current popular usage might be difficult to say.

The Measurement of Adult Intelligence. By DAVID WECHSLER. 248 pages. Williams & Wilkins Company. Baltimore. 1941. Price $3.50.

This is a second edition of a book which appeared first in 1939 and had a very good reception. The new edition has given the author an opportunity to add a chapter on the clinical features and diagnostic applications of the scale. In addition, other changes have been made in the text which add to clearness and ease of understanding on the part of the subject being tested. In other respects the new edition follows the general form and text of the first edition. It is divided into three parts. Part I discusses the nature and classification of intelligence, a subject covered in six chapters. Parts II and III have to do with the Bellevue Intelligence Scales and the manual of Bellevue Intelligence Scales.

The book presents, in a readable form, all that is worthwhile in both theoretical and practical aspects of mental deficiency. During the present generation, much advancement has been made in the study of this subject and interest is steadily developing. There is much yet to be done in this field and Wechsler does not hesitate to point out what is lacking in attempts which are being made in various directions for perfecting the art of intelligence testing in the case of the subnormal, the average and those more gifted children and adults who are often in need of guidance.

The Eclipse of a Mind. By ALONZO GRAVES. 722 pages. Cloth. The Medical Journal Press. New York. 1942. Price $5.00.

Clifford Beers wrote "A Mind That Found Itself" as a conscious contribution toward what became the mental hygiene movement. Most of his followers and imitators among patient-authors have written with the frank and obvious intent of producing something to sell. A few, like Elaine Kinder and "Jonathan Lang," have made—on recovery or during remission—serious scientific contributions to psychiatric literature. Mr. Graves' volume differs from all these in that it has no crusading or money-making purpose; although it can be considered a serious contribution to the literature, it was not written with conscious intent to make one; it was all written while the author was still a patient, much of it while he was still actively psychotic; and there was no expectation during the writing that the work would ever be published.

"The Eclipse of a Mind" is an autobiography and case history, written by a patient at the request of his psychiatrist for the physician's personal use in psychotherapy and other treatment. It differs from thousands of such manuscripts written for similar reasons in several respects which have brought about its publication. Its author was a professional writer and therefore, produced a well-constructed, generally coherent—writing in

manic periods excepted—account of himself and his mental aberrations. There was an unusual, although very far from complete, degree of insight into symptomatology and behavior on the part of the patient himself. He had full access to his own case records and could make, in less excited moods, comment on his own mental content and activities to parallel that of the physicians. Permission for publication was given during a period of remission; and the fact that the author's whereabouts have not been known definitely for some years suggests that neither he, relatives, nor friends can be embarrassed by the present printing. In a brief preface, the psychiatrist who merely lists himself as "the attending physician," but who apparently can be identified readily elsewhere in the volume, sets forth that the work is not intended "entirely" for the "popular reader," although he feels that such a reader might learn from it "many a lesson that he could not get otherwise." He suggests that, aside from psychiatrists, the study should be useful to "sociologists, psychologists, anthropologists and human biologists," a point of view with which agreement can be expressed here.

Mr. Graves was—perhaps still is—a newspaper man. There is plenty of internal evidence in his book to support his own conviction that he was a very good one. His first breakdown, which did not lead to hospitalization, followed a mistake in judgment in which he moved from managing editor to general manager of a money-losing newspaper; the seven later episodes, with five hospitalizations, occurred while he was a Washington correspondent. His book covers his family history, personal history and first four hospitalizations. In his last period in the hospital, he did not cooperate by writing; and this episode is represented solely by the hospital records. His virtual disappearance, in 1934, followed that hospital stay while the author was still on the rolls as an out-patient.

This book appears to be a full and frank picture of a man's career and his inner life, insofar as that inner life is available to his consciousness. Brought up in a quarreling home, convinced from an early age that his family had a mental taint and that he should never marry, diagnosed—perhaps incorrectly—when a youth, as having syphilis, Mr. Graves early acquired a morbid dread of mental disease and a pronounced syphilophobia. His psychotic breaks were predominantly manic but with strong schizophrenic features. He was paranoid, there were ideas of influence, and there was one acute homosexual panic. In this connection, it may be wondered if even such a well-informed patient, with the exceptional insight of this one, should be permitted to learn of such a diagnosis. Through much of his book, his insistence recurs that he is not a "pervert." If a word can be understood only in its popular sense, knowledge of it can hardly be said to add to the insight of a patient.

The volume on the whole is of great interest and value. As "the attending physician" observes in the preface, the writing betrays the current state of the patient's mind, manic as the account starts and delusions are elaborated, levelling off as the story goes on. It may be guessed that Mr. Graves' "normal" news writing was at least slightly hypomanic. One may question the conclusion in the preface that the material in this book "is more objective and therefore scientifically more valid than when obtained through other approaches, including the accepted psychoanalytic approach." It is unquestionably different; there is no more than a scratching of the surface layer of the unconscious; and presentation of the unconscious material surely would have added to the value of the book. Here it may be of interest to note that a psychiatrist at the staff conference which preceded Mr. Graves' fourth hospital discharge—presumably the writer of the preface—reported he had been ready "to take recourse to the accepted psychoanalytic method of free association and dream interpretation" to fill in the gaps of the narrative when the recovered patient had demanded his discharge.

The Clarks. An American Phenomenon. By WILLIAM D. MANGAM. 275 pages with "critical comments." Cloth. Silver Bow Press. New York. 1941. Price $2.50.

This book might very well have a case number with subtitles for family and personal histories. It is a seemingly matter-of-fact record of two generations of an American family from the Civil War to the late 1930's.

The family's founder, after a brief war service of which he made a mystery—he may have deserted, the author notes—undertook a variety of activities which were on the edge of being asocial or were actually anti-social. He engaged in sharp business practice and political corruption. Before his marriage, there were a number of illegitimate children for whose support he made no effort to provide. After she had borne four children, his first wife was separated from him for some years before her death. He had had extra-marital affairs during this time; and his second wife was a woman he had been supporting for some time who had already had a child by him before their marriage. There were reports that the second child by this marriage was the daughter of the wife by a man other than the husband.

Of the children of the first marriage, one daughter showed characteristics of penuriousness; a second was married three times, was known to have had extra-marital relations and had the reputation of being a drunkard. One son was a gambler and heavy drinker whose numerous infidelities finally caused his wife to divorce him. The other son also had a history of extra-marital relationships, including paraphiliac practices with women. In mid-

dle life, his record was one of overt homosexuality. There were several instances of pederasty, of transvestitism, of nude male parties. Criminal prosecutions were narrowly averted. His wife was about to divorce him when she conveniently died.

Of the second marriage of the family's founder, the first child died when a young girl. The second, the girl upon whose paternity doubts were cast by the children of the first marriage, was married at 22 and divorced shortly afterward. It is recorded that the marriage was never consummated, but authority for this is not given. The author observes, "She had a mother complex," which may not be the best psychiatric terminology but is sufficiently indicative of the situation. This daughter, now in her thirties, lives with her widowed mother.

It might be well to observe now that this is not a record of Jukes or Kallikaks. The founder of the family was William Andrews Clark who became enormously wealthy through manipulation of mine holdings and who served as United States Senator from Montana after a bribery scandal of national proportions. He was a cultured man—or at least acquired a thick veneer of culture—passed much of his later life in France and was a notable art collector. He financed the education abroad of the woman who became his second wife; and both the children of his first and second wives were brought up in an atmosphere of luxury and refinement.

Of his children, all tremendously wealthy, one daughter attracted attention only by reluctance to spend money; the two other daughters and one son had careers which seem on the record to be abnormal; but none was notorious. The other son, the overt homosexual, escaped on numerous occasions from the consequences of his practices by large and carefully timed philanthropies. He died in respectability and with the honors of a public benefactor.

All this is set forth as a bare framework of facts by Mr. Mangam. He does not speculate as to the psychology of his characters or discuss other than their most obvious motives. "Here," he might almost be saying, "is the record of who they were, what they did and what happened to them: Draw your own conclusions." It will be noted that this is no ordinary biography or family history. It will also be noted that few reviewers are in any position to pass on the question of factuality. The present reviewer certainly cannot pass on the facts. Such support as can be given for factuality must be found in the observation that while it may be impossible to libel the dead, some of Mr. Mangam's characters are very much alive and in a position to take action if they feel it advisable. The author does not disclose his reason for writing the book. For some years, he was a business associate of the younger Clark, the man whom he describes as the homo-

sexual who protected himself by philanthropy. There is an evident effort to be objective, to set down without praise or condemnation. Mr. Mangam necessarily uses non-psychiatric terminology to describe aberrant sex conduct; and his words may appear to imply moral judgment where close study indicates there was every effort to avoid making one.

Because of the book's unusual character, Mr. Mangam has seen fit to include "critical comment" on it by representative persons of several walks of life. The psychiatric observer will find this comment interesting. He will find the book itself worth serious attention. Both for its content and for the possibilities it suggests of a new form of biography, it may have some lasting importance.

The Conquest of Bacteria. By F. Sherwood Taylor. 175 pages. Philosophical Library and Alliance Book Corporation. New York. 1942. Price $2.00.

This volume is written primarily for the lay reader. It describes the development of chemotherapy, especially from salvarsan to sulfapyridine, in a simple manner so as to be easily understood.

The first part of the book is devoted to a discussion of protozoa, of the more common pathogenic bacteria and of the filterable viruses, together with their means of transmission and their control. The defenses of the body and the artificial production of immunity to control disease are considered in one chapter. Development of the newer drugs particularly the sulfonamides and the results obtained from them occupy the remainder of the book, with the exception of the last chapter, wherein the author presents a plea from the economic and humanitarian viewpoint for government sponsorship of further research in the field of chemotherapy rather than sponsorship by private enterprise. He also believes patents for the manufacture of new drugs should be denied for the same reasons. The author is English, so most of his statistics and comparisons of treatment are quoted from British sources.

It is unfortunate that the author so lightly dismisses serum therapy, inasmuch as many of this country's outstanding authorities on pneumonia therapy contend that in certain cases the use of a specific antipneumococcus serum is indicated together with chemotherapy, in spite of the spectacular results obtained with the use of the sulfonamide drugs alone.

The book is written in a clear, interesting manner and should be of interest to members of the public who have heard of the use of the sulfonamide drugs in the conquest of infections.

Handwriting Analysis. A Series of Scales for Evaluating the Dynamic Aspects of Handwriting. By THEA STEIN LEWINSON and JOSEPH ZUBIN. With a foreword by Nolan D. C. Lewis; appendices, charts, graphs, specimens, tables, working forms and bibliography. 147 pages. Photolithographed from typewritten copy. Boards. King's Crown Press. New York. 1942. Price $2.00.

Mrs. Lewinson and Dr. Zubin, who is associate research psychologist at the New York State Psychiatric Institute and Hospital, report here the results and conclusions derived from long and intensive effort to study the scientific sub-strata underlying a practice which has been in as much disrepute in America as that of astrology, palmistry or phrenology. To students of the Rorschach, of play therapy or of other personality projection methods, it might seem obvious that one cannot write by hand without projecting something of the personality into the result; and graphology, therefore, should be a valid field for research and a promising one for the development of clinical psychiatric criteria, once a scientific system of analysis can be established.

"The purpose of this book," say the writers, "is to provide an objective method for classifying handwriting into factors which graphologists have found useful in their evaluations . . . The plans have been laid out, but much work will have to be done before the undergrowth that has collected can be cleared and basic progress in rearing the graphological structure made." The claim is modest and appears thoroughly justified by the studies reported. And so is the conclusion that ". . . when carefully controlled measures and rating scales are applied, it becomes possible to discern an underlying differentiating pattern in the handwriting of an individual which may well prove to be the basis for understanding underlying personality structures."

Trained in Europe, where graphology has been the object of more serious scientific study than in this country, Mrs. Lewinson has practised graphology in Berlin, Paris and New York, for some years has been doing graphological research in the field of psychosomatic medicine, and has contributed articles on the handwriting of psychotics to psychiatric publications. Based on the work abroad which was initiated by Ludwig Klages and developed by Max Pulver—who introduced psychoanalytic concepts in his study—Mrs. Lewinson, proceeding according to strict, scientific method in collaboration with Dr. Zubin, has endeavored to work out an objective method of judging handwriting rhythm, as distinguished from judging it by intuitive processes. Starting from the premise that "rhythmic balance is the central point between the contracting and releasing tendencies" of

handwriting, the authors have attempted to devise scales which will measure objectively differing degrees of contraction and release in the "four components" of handwriting—the form, vertical, horizontal and depth (pressure) components. Balance or lack of balance between contraction and release may be assumed to reflect the state of affairs in the writer's personality, the direction of a lack of handwriting balance indicating the direction of personality imbalance from the normal or ideal. The total picture in the handwriting is obtained from a synthesis of the analyses of the four components.

The authors appear, as they have noted, to have provided a method of study assuring a high degree of objectivity and reliability. The question of validity of the conclusions is untouched except for the indirect method of comparing the handwritings of five normal persons and 15 psychiatric patients and noting the differences in the groups. Mrs. Lewinson, in a chapter for which she alone is responsible, draws on her long experience to set down some "working hypotheses" as to what the graphological factors mean in reflecting the personality studied. It is a chapter which suggests that this method may some day have important clinical applicability.

It should be noted that the format of the book is determined by the purpose of the King's Crown Press, a division of Columbia University Press. This purpose is to make "certain scholarly material available at minimum cost." The photolithographic work is excellently done and the volume easy to read. The board binding is sturdy and the work of a convenient size for a desk manual.

Eine Seele die sich Wiederfand. By Clifford W. Beers, published by Benno Schwabe & Co., Basel, Switzerland, 1941. (Paper binding.)

This book requires no critical review before a group of psychiatric readers. It is the first German edition of Clifford W. Beers' famous autobiography: "A Mind That Found Itself." The translation by Otto Reutter is entirely satisfactory. The chapter on the mental hygiene movement, which forms part of the American edition, is omitted. However, some points of general interest regarding the history of mental hygiene are covered in A. Repond's introduction. The German translation is edited by Heinrich Meng as the second volume in a book series entitled, "Mental Hygiene, Science and Practice." It seems interesting, although somewhat paradoxical, that this "Bible of Mental Hygiene" should be published in the German language at this period in history, when the fundamental concepts of mental hygiene are so utterly disregarded in most places where that language is spoken.

Diseases of the Basal Ganglia. By the Association for Research in Nervous and Mental Diseases. Edited by Tracy J. Putnam, M. D., chairman, Angus M. Frantz, M. D., and S. Walter Ranson, M. D. Williams and Wilkins Co. Baltimore. 1942. 710 pages with 268 illustrations. Price $10.00.

This volume contains the papers read and discussed at the New York meeting of the association held December 20 and 21, 1940. The material was contributed by 29 outstanding specialists and investigators.

The fundamental anatomy, physiology and pathology, as well as practical methods of diagnosis and treatment are emphasized in a concise manner. The first chapter is a historical introduction including several early illustrations. Emphasis is on the diseases presumably involving the basal ganglia in which new material is available. These include paralysis agitans, athetosis, dystonia and alternating tremor of various types. The growing use of neurosurgery in the treatment of these conditions is discussed in detail, including case histories, operative proceedings and the results obtained. These are illustrated by photographs of the patients, electroencephalograms and some X-rays. The latest medical treatment, including the retraining of the patient with athetosis, is described.

A lengthy list of references is given at the end of each chapter. Discussions following the reading of the papers bring out additional points of interest. The volume is well illustrated, containing numerous excellent microphotographs, photographs of gross specimens and diagrams. Case histories are freely quoted.

The high quality of previous publications by the Association for Research in Nervous and Mental Diseases is maintained, providing not only the latest contributions relating to the subject but also summarizing our previous knowledge and providing an extensive bibliography of past publications. The volume is highly recommended to the physician interested in neurology.

The Medical Aspect of Boxing. By Dr. E. Jokl. 251 pages with illustrations, bibliography and subject index. J. L. Van Schaik, Ltd. Pretoria, Africa. Price not stated.

Dr. Jokl has written a book of considerable interest, 251 pages treating of the various traumatic, neurological, psychiatric and pathological complications of the science of fisticuffs. The various types of knockouts, contre-coups, traumatic neuroses, concussions of the brain, neurological complications, with actual experiences of boxers, including Jack Dempsey and Gene Tunney, are discussed as well as physiological considerations and many other matters.

Anyone who has an intimate interest in boxing can learn a great deal from Dr. Jokl's book. If it could be read and interpreted to boxers capable of understanding even a small part of the information which it contains, there might be fewer cases to label, "punch drunk." The reviewer feels that this book has contributed a great deal to the understanding of boxing from a medical standpoint. Any physician or layman who is interested in the subject would profit considerably by reading it. It might be noted in passing that Dr. Jokl does not appear unduly fond of the English-originated sport of boxing, and it may be interesting to speculate as to what part South African Dutch influences may play in this attitude. The book is well organized, with a table of contents and illustrations and a preface, and it concludes with a bibliography and subject index.

Medical Genetics. A series of lectures presented to the medical schools of Duke University, Wake Forest College, and the University of North Carolina. By LAURENCE H. SNYDER, Sc. D. 130 pages with index and bibliography. Cloth. Duke University Press. Durham, North Carolina. 1941. Price $1.50.

The genetics of functional mental illness will no doubt continue to call for discussion, literature and investigation until such time as conclusive and successful therapeutic procedures are developed for treatment. Meanwhile, the discussion of the relative importance of these factors goes on, and "Medical Genetics" offers as fair an attempt to spread this conflict on the record as most specialized books do. For the rest, "Medical Genetics" covers as varied an assortment of hopeless and obscure conditions as the most abstract neurologist could well desire. These, and more common illnesses, are covered according to organ systems rather than according to types of inheritance pattern.

The problems of dominant and recessive factors, and of penetration of these factors, are discussed in the light of their relation to medical diagnosis and treatment. The value of the text is increased by photographs of some of the pathological conditions described. No opportunity is missed to relate specific genetic findings to medical practice, and sometimes this is done in a rather heavy-handed way. One has the impression that a bit more oral erotism in the text, more of the Dale Carnegie approach and less of the stock market report, would lead to a more rapid and more wide acceptance of the principles of genetics among the medical public generally. Beneath this, is the further impression that the subject matter of genetics has long been part of the stock in trade of the wise general practitioner, and that stating his beliefs very elaborately in the form of a separate "science" is not worth a great deal of hue and cry.

By far the most interesting part of "Medical Genetics" is the second chapter, 11 pages devoted to "Medicolegal Applications." It appears that these applications consist of tests to exclude paternity of putative fathers, and that on the basis of these tests and statistical inferences drawn from them, "only one-half of the accused men were actually the true fathers." (Page 18.) As Confucius did not say, "Any vinegar knows its mother, but its a wise cork that knows its own pop."

Foundations for a Science of Personality. By ANDRAS ANGYAL, M. D., Ph.D. 398 pages. The Commonwealth Fund. New York. 1941. Oxford University Press. London. Price $2.25.

This is an astute work showing profound philosophic awareness of the relation between science and first principles. Dr. Angyal's thesis is that we need an "entirely new science" for the study of the whole personality. He is not satisfied that taking facts from many separate disciplines will fill the need of understanding the personality as a whole. His is a Gestalt or "holistic" approach to the problem. Just as, "an ideal psychiatry would be a well-founded science of the 'abnormally' behaving person," so there should be "a basic science dealing with the 'normally' functioning person." This would be a science of personality.

The first step is to establish the fact of an organismic trend toward autonomy. Life can be defined as "a process of self-expansion," and it is a process not *within* the organism, "but *between the organism and the environment.*" The author shows the biological stimulus-response relationship on a higher level than the mechanical. The development of this point of view is a remarkably fine piece of reasoning. He brings out the reciprocal process involved in the life of every organism, namely, the "autonomous" determinations which stem from the organism, and the "heteronomous" determinations which come from the environment. What the author wishes to establish is the following: "If one considers the organismic total process with regard to the a:h ratio (autonomy-heteronomy), one discovers *a definite trend in the organismic total process toward an increase of the relative value of a (autonomy) in this ratio, that is, a trend toward an increase of autonomy.*"

The author adequately deals with cases of regression which appear at first to indicate that heteronomous or environmental factors predominate, and is able to say, "Life is an autonomous dynamic event which takes place between the organism and the environment. Life processes do not merely tend to preserve life but transcend the momentary status quo of the organism, expanding itself continuously and imposing its autonomous determina-

tion upon an ever increasing realm of events." (p. 48) Emphasis is placed on the word "increasing." This trend is recognized as a descriptive generalization regarding the organic process. Consequently, the author is not offering a teleological explanation in the traditional sense. He does not say anything about the goal of life, but simply asserts that the observed trend is directional and therefore enables us to discover what objects can be goals.

Passing from biology to psychology, the general thesis obtains, but it is held that mental processes are operations of the mind with meanings or symbols. Even emotions are symbols—"*emotional experiences are symbols of value-laden ego-relevant facts.*" So that in the realm of psychology, "The individual and the environment can now meet on the symbolic, representative ground of psychological function." . . . "Life is now carried out partly on a symbol level, but without change in its general dynamic trend." Even though it certainly appears to be the case that symbolic relations do not occur in nature outside of the psychological realm, the author prefers to flank the epistemological problem of how organic happenings are translated into phenomena of consciousness. He prefers to avoid the old philosophical debate at this point by making no more of a mystery of consciousness than of the organism's secretion of bile. Both are functions of the organism as a whole and to be taken for what in experience we find them to be.

It is especially interesting to find the view expressed regarding "Value" that "the feeling tone of emotions" is "the experience of the state and of the situation of the person under the aspect of value." That is, "The biological situations are constantly evaluated by the organism from the point of view of their significance for the life process." The reviewer has been endeavoring to construct an objective "value theory" from precisely this point of view. He feels that the discussion on the relation of emotion to value, together with the biological significance of symbolization, is valid and important.

Dr. Angyal has redefined various terms and coined others. The concept "biology" has a far more extensive meaning than its conventional use in that the environment is included as well as the organism. An example of a new term is the word "homonomy." The word stands for the empirically observed fact that individuals do tend to identify themselves with groups or social wholes which may be called superindividual wholes. No individual really lives unto himself, for the fact is "that man's attitudes are to a large extent oriented toward superindividual units." Such a unit may be a church, a cause, a country. This is a tendency different from the self-assertive tendency which is called "autonomous." A term is required to designate the tendency toward union with others; the subordination of the

autonomous self in some larger whole, and this is named "the trend toward homonomy." The relation between these two trends is splendidly analyzed. No objection should arise to the use of terms here indicated so long as they are well defined, and this the author has clearly done. (There appears to be a typographical error in the first paragraph of p. 175 which, from the context of the paragraph should read, "The autonomous trend," not, "The homonomous trend" as printed.)

The bearing of the above aspects of personality to cultural factors is also well done, but it differs somewhat from the Freudian or analytic interpretation, particularly with reference to the "super-ego." Angyal himself states that whereas in psychoanalysis "the super-ego seems to be more or less a necessary evil," he wishes to emphasize "that the assimilated cultural patterns, that is, the super-ego, correspond to very basic needs of the person because they allow the expression of homonomous tendencies." But the reviewer does not think this is altogether fair to psychoanalysis for, granted that the super-ego does indeed function as the consequent or fulfillment of the homonomous tendency, which the psychoanalyst may admit; the fact still remains that some particular culture pattern functioning as a super-ego, may be very harmful to the individual. That is to say, that particular super-ego has falsely fulfilled, or run beyond the basic needs of the homonomous trend. This reviewer is not aware that the psychoanalyst would deny a proper function to the super-ego compatible with Angyal's "homonomous trend." However, discussion of this homonomous trend, and its importance in social psychology is very fruitful.

The reviewer has already run beyond his space, but that is a compliment to this very suggestive book. However, some of the most valuable material of all is contained in the chapters on "Problems of Integration," "Disturbances of Integration" and "The Course of Life as Gestalt." The reviewer thinks this book is very important. Certainly if the theoretical system of personality structure can be verified, it will prove to be foundational.

General Psychology. By R. B. CATTELL 615 pages. Cloth. Sci-Art Publishers. Cambridge, Mass. 1941. Price $3.50.

Professor Cattell is widely known as a teacher and writer on psychology and allied subjects. He occupies the G. Stanley Hall chair in genetic psychology in Clark University. As he is a successor to Professor G. Stanley Hall one would anticipate that his writings and teachings would reflect advanced modern concepts; and this anticipation would be fulfilled upon reading his comprehensive textbook—which this volume really is.

It is interesting to observe the change that has taken place in the conceptions and teachings of psychologists during the past generation. Formerly, the dreariest and most impractical of disciplines, psychology has become humanized, pragmatic and, withal, interesting.

The psychology of Clark University has been from the beginning dynamic and genetic, characteristics which are clearly reflected in this book. The author states his purposes in writing it: "I wanted something which would have the same attractiveness (as the unscientific presentation) whilst meeting all the requirements of a thorough introduction to psychology, laying a sound foundation for later specialized study." This approach he has quite effectively fulfilled.

Intelligence measuring very properly introduces the subject. From this point, the author passes on to varying abilities and social aims. Some attention is still deemed necessary to human physiology. For one thing, it introduces the conditioned reflexes and the apparent motives of men and their varying abilities. From a description of the nervous system, the text goes on to the relations of body and mind. Professor Cattell gives ample discussion to the subject of heredity and environment.

It seems to this reviewer that Cattell would have done well to have soft-pedalled the Jukes and the Kallikaks. It makes an impressive presentation, no doubt, to the students to be told of the contrast between these two and the celebrated Jonathan Edwards family, but in making this contrast, the author abandons his declared intention (page 7) to avoid anything which would be a departure from " a rigorous scientific method" or to practice "the nauseous art of 'gilding the lily' of scientific discovery with the false colors of journalistic sensationalism." The lurid biographies of the Juke and Kallikak families are now quite thoroughly discredited. For one thing, that of the Kallikaks professes to go back through nine generations of scalawags and ne'er-do-wells of little education to determine how many were thieves, how many were paupers and how many were prostitutes. These family histories, so-called, were compiled in the early years of eugenical science (1877) when critical analysis was not applied. It is really surprising that this fiction held the stage as long as it did. It was made up largely of tradition, rumor, assumption and imagination. It is to be hoped that the curtain has been rung down on these fictional families. There are other and more reliable examples, not so sensational it is true, but more dependable, which will illustrate the interplay of heredity and environmental factors. Professor Cattell mentions several.

After noting that ample space is devoted to a general survey of psychology at Chapter 22, the reader comes to a section captioned "Psychology and Life," which is treated in three chapters. It covers the significance and ap-

plication of psychotherapy, applications of psychology to industry, commerce and vocational guidance, to education and the work of the schools and to social, cultural and political problems. All this is profitable and interesting. The author naturally reviews the newer psychologies, giving ample space to the views of Freud, Adler, Jung, as well as Havelock Ellis. These chapters cover the subject with fairness and discrimination. It might be remarked that the author accepts the conclusions of Alfred Adler more fully than psychiatrists are prone to do, but in this respect he is not singular. Most schoolmen seem to find in Adler merits which escape the attention of the psychiatrists. The dynamic and genetic aspects of psychology receive an understanding presentation. Indeed, the treatment is so much superior to most such formulations as to be worthy of special commendation.

This textbook, which embraces a survey of the whole field of psychology, is an important contribution to psychology and to psychiatry. It is to be expected that its success will be notable as a text for college and professional students. The author's purpose of writing a textbook which would prove attractive to the student as well as instructive, and which would provide a sound foundation for further study, has been accomplished creditably.

HUGH S. GREGORY, M. D.

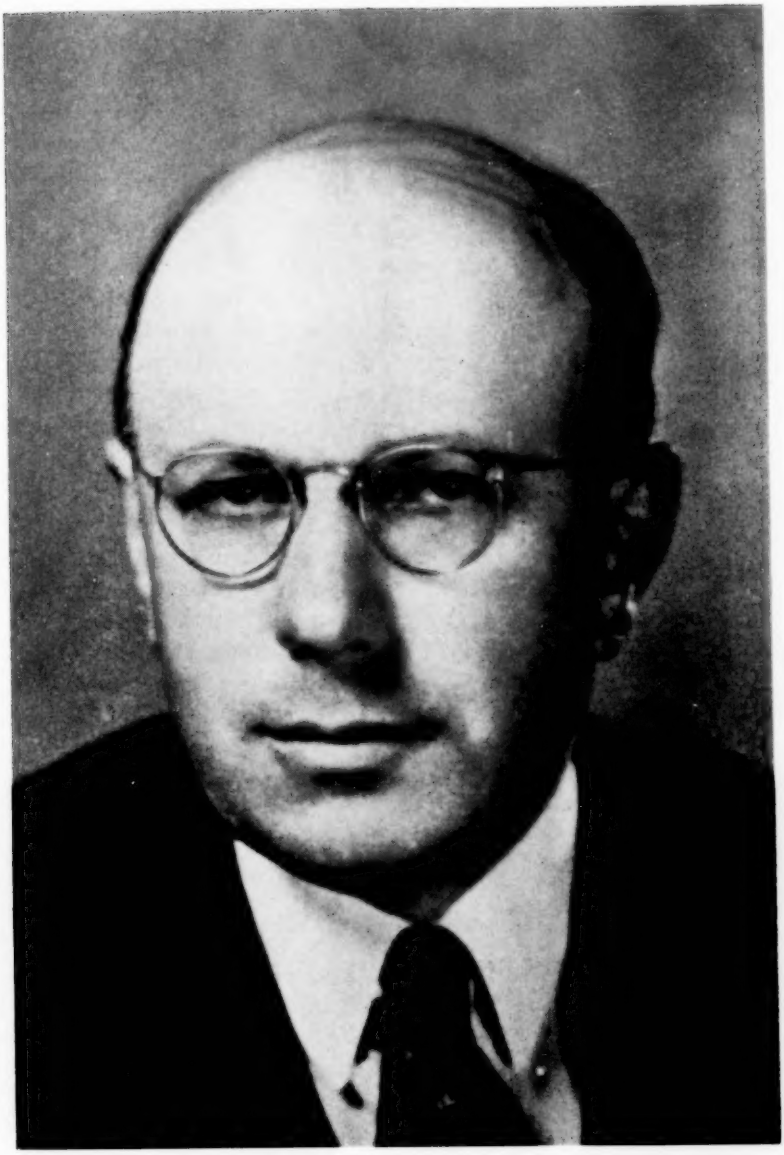
Hugh S. Gregory, M. D., acting medical inspector of the Department, has been appointed by Dr. William J. Tiffany, Commissioner, to the position of superintendent of Binghamton State Hospital, effective July 1, 1942. He succeeds the late Dr. William C. Garvin, who died on April 3 of this year.

Dr. Gregory was born in Edmeston, N. Y., June 26, 1889. His preliminary education was obtained in the public schools of Albany. After a brief experience as a school teacher, he entered the Albany Medical College and was graduated therefrom in 1913 with the degree of doctor of medicine.

He entered the State hospital service June 2, 1913, as medical interne in St. Lawrence State Hospital and subsequently moved through the various official grades in that and other State institutions, including Craig Colony, Binghamton State Hospital, Newark State School and Creedmoor State Hospital. From this last institution, where he served as first assistant physician, he was designated acting medical inspector, in which capacity he served for about one year prior to his appointment as superintendent at Binghamton.

The greater part of his professional career, however, was spent at Binghamton State Hospital where he was resident pathologist for about 17 years and clinical director for one year. Most of his writings and research studies have been in the field of neuropathology and clinical laboratory techniques.

On September 16, 1915, Dr. Gregory was married to Miss Ethel A. Retersdorf of Utica, N. Y. They have two sons: Robert, aged 25, and Howard aged 23.



HUGH S. GREGORY, M. D.

NEWS AND COMMENT

DR. WILLIAM C. GARVIN IS DEAD AT 68

Death following a long illness closed the career on April 3, 1942, of William C. Garvin, M. D., superintendent of Binghamton State Hospital since 1924. He had been for more than 35 years in the State hospital service, and he was regarded as responsible for important developments in the system.

As superintendent of Kings Park State Hospital from 1918 to 1924, Dr. Garvin planned, with the State architect, the Veterans' Memorial Hospital at that institution; and he initiated the provision of special facilities for children by setting aside two cottages for their care and treatment at Kings Park. The later provision of special buildings for children at Rockland is largely attributable to the attention which Dr. Garvin's pioneer work focused on the problem.

In his years at Binghamton, Dr. Garvin was active in department affairs. He had been chairman of the committee on construction and chairman of the committee on uniforms of the Department of Mental Hygiene. He retained an active interest in clinical matters, although much of his time was demanded for administration, and it is said that he seldom missed a staff meeting. At Binghamton, he took an active part in promoting the knowledge of mental hygiene in his hospital district and in encouraging his staff members to do likewise. He did much to promote community interest in mental hospital problems.

William C. Garvin was born in Philadelphia in 1873, spent his boyhood there and in New York City, and, as a youth, lived for a time in Colorado, where he engaged in mining with his father. Later, he returned to the east where he studied medicine. He was graduated from the College of Physicians and Surgeons in 1903 and, after two interneships, entered the State hospital service in 1905. He resigned a year later, reentered the service in 1907 and remained in it up to the time of his death. He was married in 1914 to Cecelia M. Silleox and that same year spent six months abroad in professional study. He was first assistant physician at Kings Park State Hospital in 1918 and was promoted to superintendent there in that year on the death of Dr. William Austin Macy.

Dr. Garvin belonged to the usual professional associations and was an author of articles on both clinical and administrative subjects. Besides his wife, he leaves two sons, a daughter and two grandchildren. A memorial tribute to Dr. Garvin was read at the Quarterly Conference in Albany by Superintendent Blaisdell of Rockland State Hospital. Dr. Blaisdell's tribute will be published in the July number of THE PSYCHIATRIC QUARTERLY SUPPLEMENT.

DR. POLLOCK HEADS MENTAL DEFICIENCY ASSOCIATION

A high honor was reflected on the New York State Department of Mental Hygiene at the sixty-sixth annual meeting of the American Association on Mental Deficiency when Horatio M. Pollock, Ph.D., director of mental hygiene statistics for the Department became president of the association. Edward J. Humphreys, M. D., of Letchworth Village, was again chosen editor of the American Journal of Mental Deficiency at the meeting, which was in Boston from May 13 through May 16, 1942.

Many other members of the Department took an active part in the gathering. H. Beckett Lang, M. B., assistant commissioner, presented a paper on "The Mentally Defective in War Time" which was discussed by Robert A. York, director of boys' colonies and paroles of the Rome State School. Harry C. Storrs, M. D., superintendent of Letchworth Village, presided as a section chairman and took part in discussions and a symposium; and among those presenting papers were Raymond G. Wearne, M. D., superintendent of Wassaic State School; Benjamin Malzberg, Ph.D., senior statistician of the Department; Miss Hester B. Crutcher, director of psychiatric social work for the Department; and Miss Katherine G. Ecob of the State Charities Aid Association.

Others presenting papers or discussing them included Dr. Humphreys, George A. Jervis, M. D., Suzanne A. Howe, M. D., Elaine F. Kinder, Ph.D., Annette Chase, Etem Vassaf, M. D., Mrs. Arthur Menzel and Bennett M. Lathrop, D. D. S., of Letchworth Village; Robert A. York of Rome State School; and B. Edmond Thomas, M. D., and Arthur W. Pense, M. D., of Wassaic State School.

Officers chosen besides Dr. Pollock and Dr. Humphreys were: Dr. C. Stanley Raymond, Wrentham, Mass., president-elect; Dr. Neil A. Dayton of Mansfield Depot, Conn., secretary-treasurer; and Dr. Lloyd N. Yepson of Trenton, N. J., Miss Mabel Matthews of Hartford, Conn., and Dr. F. V. Willhite of Redfield, South Dakota, vice-presidents.

DR. BLUMGART HEADS PSYCHOANALYSTS

Leonard Blumgart, M. D., was elected president of the New York Psychoanalytic Society and Institute to succeed Adolph Stern, M. D., at the society's meeting on May 26, 1942. Philip R. Lehrman, M. D., was elected vice-president to succeed Lillian D. Powers, M. D.; and Henry A. Bunker was chosen as secretary to replace Dr. Lehrman. Samuel Atkin, M. D., was reelected treasurer.

SERVICE ADDRESSES ARE REQUESTED

In accordance with directions from the New York State Department of Mental Hygiene at Albany, THE PSYCHIATRIC QUARTERLY hereby requests all institutions in the Department to send to The State Hospitals Press at Utica State Hospital the last-known mailing addresses of all medical officers now in the armed services and of the addresses of physicians entering the services in the future.

To insure that these officers will henceforth receive the copies of THE QUARTERLY and THE PSYCHIATRIC QUARTERLY SUPPLEMENT to which they are entitled—and in compliance with instructions from the United States Post Office Department—the publications will be mailed second class to last-known addresses, with the Army or Navy assuming responsibility for delivery from those points. Last-known mailing addresses should be submitted separately for members of the non-medical personnel who are in the services and who ordinarily receive THE SUPPLEMENT but not THE QUARTERLY.

Publications mailed directly to persons in the services will, of course, be omitted from those customarily sent to the institutions.

THE DEATH OF MILTON A. HARRINGTON, M. D.

Milton A. Harrington, M. D., psychiatrist and writer of Napanoch, N. Y., died at his summer home in Marthas Vineyard, Mass., on May 27, 1942, at the age of 58. Dr. Harrington was well known in New York State hospital circles. He served for a number of years at the Bloomingdale Hospital, now the New York Hospital—Westchester Division; and from 1918 through June of 1920, he was acting senior assistant physician at the Psychiatric Institute of the New York State Hospitals. Born at Walkertown, Ontario, Dr. Harrington received his medical degree from the University of Toronto in 1910. He interrupted his service in American mental hospitals in 1916 to serve in France in the medical corps of the British army. He had been in private practice since 1920.

Dr. Harrington was author of "Wish-Hunting in the Unconscious," a work dealing with psychoanalysis, and of "A Biological Approach to the Problem of Abnormal Behavior." He was a member of the American Psychiatric Association, the American Psychopathological Association and the New York Neurological Association. He leaves his widow and a daughter.

NEW YORKERS ARE ACTIVE AT ASSOCIATION MEETING

Medical officers of the New York civil State hospitals took active and important parts at the ninety-eighth annual meeting of the American Psychiatric Association in Boston, May 18, 19, 20 and 21. Harry A. Steckel, M. D., superintendent of the Syracuse Psychopathic Hospital, was chairman of a section on morale and military psychiatry; and Nolan D. C. Lewis, M. D., director of the New York State Psychiatric Institute and Hospital, was chairman of a section on schizophrenia and secretary of one on convulsive disorders. Harry J. Worthing, M. D., superintendent of Pilgrim State Hospital, was coauthor of two papers dealing with shock therapy, with the discussion of one of them by Clarence H. Bellinger, M. D., superintendent of Brooklyn State Hospital, and Frederick W. Parsons, M. D., former commissioner of the New York State Department of Mental Hygiene.

Others represented by paper or exhibit included Leland E. Hinsie, M. D., S. E. Barrera, M. D., W. A. Horwitz, M. D., B. E. Pacella, M. D., Lenore M. Kopeloff, Ph. D., Nicholas Kopeloff, Ph. D., Philip Polatin, M. D., Hyman Spotnitz, M. D., Reginald S. Lourie, M. D., and Paul H. Hoch, M. D., of the New York State Psychiatric Institute and Hospital; Newton J. T. Bigelow, M. D., Henry Brill, M. D., and Lothar B. Kalinowsky, M. D., of Pilgrim State Hospital; Walter A. Thompson, M. D., of Rockland State Hospital; Eugene Davidoff, M. D., and Gerald M. Goodstone, M. D., of Syracuse Psychopathic Hospital; and H. S. Barahal, M. D., of Kings Park State Hospital. Joseph Zimmerman, M. D., and Leonard Garfinkle presented an exhibit from Brooklyn State Hospital on the art of the adult psychotic, a subject on which they had reported a paper published in the April, 1942, issue of THE PSYCHIATRIC QUARTERLY. Among those taking part in discussions were B. Pollack, M. D., of Rochester State Hospital; and Major James A. Brussel, M. C., U. S. A., of Fort Dix, N. J., who is on military leave of absence from Pilgrim State Hospital.

—o—

CITY LEASES NEW STATE SCHOOL

The new Willowbrook State School on Staten Island has been leased by the State to New York City for the war emergency. With construction well advanced, the new institution had been expected to increase materially the facilities of the Department of Mental Hygiene for the care of mental defectives. It is now expected that it will be used during the emergency for the care of chronic patients evacuated from New York City hospitals, leaving the beds they now occupy available for victims of air raids or other emergencies. Governor Lehman signed the lease under provisions of a new law giving the State the authority to rent property to the Federal government or to a city within the State during the war emergency.

DEATH OF DR. IRWIN H. NEFF

Dr. Irwin H. Neff, Michigan psychiatrist and formerly well known in psychiatric circles in the east, died in Pontiac, Mich., on May 11, 1942, after a brief illness, at the age of 73. He had practised in Detroit, Pontiac and Birmingham, Mich., for more than 20 years and had formerly served on the staffs of Michigan state hospitals.

For some years prior to World War I, Dr. Neff was an important figure in the Massachusetts state hospital service. He was appointed superintendent of Foxborough (Mass.) State Hospital during a reorganization in 1908, and was responsible in that capacity for the special report of the board of trustees of that institution to the Massachusetts legislature which resulted in the construction of the Norfolk State Hospital at Pondville, Mass. This hospital was opened in 1914 for the treatment of male inebriates and drug habitués, and Dr. Neff was transferred from Foxborough as its first superintendent. He served in the army as a major during the first World War. He leaves his wife and two sons.

"ONE HUNDRED YEARS OF AMERICAN PSYCHIATRY"

Details of the publication in 1944 of "One Hundred Years of American Psychiatry" have been made public in advance subscription announcements to members of the American Psychiatric Association. The volume of more than 500 pages will be issued at the annual meeting which observes the centenary of the association. It is under the general editorship of J. K. Hall, M. D., association president, with Gregory Zilboorg, M. D., associate editor, Henry Alden Bunker, M. D., editorial assistant, and an editorial board of members chosen from the American Psychiatric Association and the American Association of the History of Medicine. Subscriptions now, paid in advance, will be $4 for members of the two associations, $4.50 for others; and the list price after publication will be $5. The 13 chapters are to be written by outstanding authorities in specialized psychiatric fields; and publication plans, war-time conditions permitting, call for a high grade of paper, printing and binding.

ROCKLAND ANESTHETIST IS DEAD

Dr. John W. Sansam, anesthetist for more than 40 years at the Nyack Hospital and long on the consulting staff of Rockland State Hospital in the same capacity, died in Nyack on May 11, 1942, at the age of 72. Besides his active practice as a specialist, he held the position of health officer for the town of Orangetown.